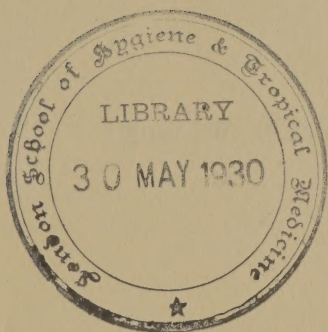


To be returned to :

UNIVERSITY OF LONDON LIBRARY DEPOSITORY,
SPRING RISE,
EGHAM,
SURREY.

From

THE LONDON SCHOOL OF HYGIENE
AND TROPICAL MEDICINE,
KEPPEL STREET,
LONDON, W.C.1



WELLCOME INSTITUTE
LIBRARY

Coll.	weIMOmec
Call	
No.	

LONDON SCHOOL OF HYGIENE
AND
TROPICAL MEDICINE
LIBRARY.

JOURNAL

OF THE

STATISTICAL SOCIETY.

(Founded 1834.)

VOL. XLII.—YEAR 1879.

LONDON:
EDWARD STANFORD, 6, CHARING CROSS, S.W.

1879.

1732

NOTICE.

THE Council of the Statistical Society wish it to be understood, that, while they consider it their duty to adopt every means within their power to test the facts inserted in this *Journal*, they do not hold themselves responsible for their accuracy, which must rest upon the authority of the several Contributors.

STATISTICAL SOCIETY.

Honorary President.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.

COUNCIL AND OFFICERS.—1879-80.

Honorary Vice-Presidents

(having filled the Office of President).

THE RIGHT HONOURABLE THE EARL OF SHAFTESBURY, K.G., D.C.L.	THE RIGHT HONOURABLE THE LORD HOUGHTON, D.C.L., F.R.S.
THE RIGHT HONOURABLE THE EARL OF HARROWBY, K.G., D.C.L.	WILLIAM NEWMARCH, Esq., F.R.S., F.I.A. (Corr. Member Inst. of France).
THE RIGHT HONOURABLE THE LORD OVERSTONE, M.A., F.R.G.S.	WM. FARR, Esq., M.D., D.C.L., F.R.S., &c. (Corr. Member Inst. of France).
THE RIGHT HONOURABLE THE EARL OF DERBY, D.C.L., F.R.S.	WILLIAM A. GUY, Esq., M.B., F.R.C.P., F.R.S.
THE RIGHT HONOURABLE THE LORD HAMPTON, M.A., G.C.B., D.C.L.	JAMES HEYWOOD, Esq., M.A., F.R.S., F.G.S., &c.

GEORGE SHAW-LEFEVRE, Esq., M.P.

President.

THOMAS BRASSEY, Esq., M.P.

Vice-Presidents.

F. J. MOUAT, M.D., F.R.C.S.
A. J. MUNDELLA, M.P.

FREDERICK PURDY.
SIR R. W. RAWSON, C.B., K.C.M.G.

Trustees.

JAMES HEYWOOD, Esq., M.A., F.R.S. | SIR JOHN LUBBOCK, BART., M.P., F.R.S.
WILLIAM NEWMARCH, Esq., F.R.S.

Treasurer.

RICHARD BIDDULPH MARTIN, M.A.

Council.

MAJOR-GENERAL H. P. BABBAGE.
ARTHUR H. BAILEY, F.I.A.
T. GRAHAM BALFOUR, M.D., F.R.S.
A. E. BATEMAN.
STEPHEN BOURNE.
EDWARD WILLIAM BRABROOK, F.S.A.
JAMES CAIRD, C.B., F.R.S.
J. OLDFIELD CHADWICK, F.R.G.S.
HAMMOND CHUBB, B.A.
HYDE CLARKE.
LIONEL L. COHEN.
CAPTAIN PATRICK G. CRAIGIE.
JULAND DANVERS.
ROBERT GIFFEN.
FREDERICK HENDRIKS.

HENRY JEULA, F.R.G.S.
PROF. W. S. JEVONS, M.A., LL.D., F.R.S.
FRANCIS JOURDAN.
PROFESSOR LEONE LEVI, LL.D.
JOHN B. MARTIN, M.A.
RICHARD BIDDULPH MARTIN, M.A.
FREDERIC JOHN MOUAT, M.D. F.R.C.S.
ANTHONY J. MUNDELLA, M.P.
FRANCIS G. P. NEISON.
ROBERT HOGARTH PATTERSON.
FREDERICK PURDY.
ERNEST GEORGE RAVENSTEIN, F.R.G.S.
SIR RAWSON W. RAWSON, C.B., K.C.M.G.
ERNEST SEYD.
CORNELIUS WALFORD, F.I.A.

Secretaries.

HAMMOND CHUBB.

ROBERT GIFFEN.

PROFESSOR W. STANLEY JEVONS.

Foreign Secretary.

FREDERIC J. MOUAT, M.D.

Editor of the Journal.

ROBERT GIFFEN.

Assistant Secretary.

JOSEPH WHITTALL.

Bankers.—MESSRS. DRUMMOND AND CO., CHARING CROSS, S.W., LONDON.

CONTENTS.

VOL. XLII.—YEAR 1879.

March, 1879.

	PAGE
Reports on:—1. The Fourth Session of the Permanent Commission of the International Statistical Congress, held in Paris, 10th—20th July, 1878.	
2. The First Session of the International Congress of Demography and Medical Geography, held in Paris, 5th—10th July, 1878.	
3. The Second Session of the International Prison Congress, held in Stockholm, 20th—27th August, 1878. By FREDERIC J. MOUAT, M.D., F.R.C.S., Foreign Secretary and Delegate, Statistical Society	1—30
Discussion on Dr. Mouat's Paper	31—35
On the Fall of Prices of Commodities in Recent Years. By ROBERT GIFFEN, ESQ.	36—68
Discussion on Mr. Giffen's Paper	69—78
The Famines of the World: Past and Present—Part II. By CORNELIUS WALFORD, F.I.A., Barrister-at-Law, Fellow of the Royal Historical Society, &c., &c.	79—265
Discussion on Mr. Walford's Paper	266—275

MISCELLANEA:—

I.—Financial and Commercial History of 1878	276—305
II.—Prices of Exports from 1861 to 1877	305—321
III.—Fires in the Metropolis during 1878.....	322—325
IV.—English Literature in the Year 1878	325—328
V.—University Boat Races and Sun-Spot Cycles	328, 329
VI.—A Suggested Coincidence between the Death-Rate and the Motions of the Planet Jupiter	330, 331
VII.—Notes on Economical and Statistical Works	331—334
VIII.—Additions to the Library, with Notes	334—344

PERIODICAL RETURNS:—

Registrar-General's Report, and Meteorological Table for England and Wales for the Year ending 1878.—The same for Scotland.—Births, Deaths, and Marriages of the United Kingdom.—Foreign and Colonial Produce Exported, 1877-73.—Trade of the United Kingdom, 1878-77-76.—Imports and Exports.—Shipping.—Gold and Silver Bullion and Specie. Average Prices of Corn in England and Wales.—Bank of England Returns.—Revenue Returns.—The London Clearances and Country Bank (Note) Circulation in United Kingdom.—Foreign Exchanges	345—368
--	---------

June, 1879.

“The Colony of Victoria: its Progress and Present Position.”	
By H. H. HAYTER, Esq., Government Statist of Victoria, Honorary Member of the Statistical Society of London, &c.	369—391
Discussion on Mr. Hayter's Paper	392—405
“On some Phases of the Silver Question.”	
By STEPHEN BOURNE, Esq., F.S.S.	406—443
Discussion on Mr. Bourne's Paper	444—455
“The Feasibility of Compulsory Education in Ireland.”	
By W. NEILSON HANCOCK, Esq., LL.D., M.R.I.A.	456—472
Discussion on Dr. Hancock's Paper	472—479

MISCELLANEA:—

I.—General Results of the Commercial and Financial History of the Year 1878	480—504
II.—Bankers' Clearing House Returns, 1867-79.....	504, 505
III.—Lloyd's Statistics of Marine Casualties for the Year 1878	505—521
IV.—Statistical Results of the last Census of France (1876)....	522—528
V.—The Movement of Travellers between European Russia and Foreign Countries from 1857 to 1876	528—534
VI.—Farmers' and Landowners' Losses	535—538
VII.—Notes on Economical and Statistical Works	539—543
VIII.—Additions to the Library, with Notes	543—558

September, 1879.

	PAGE
Report of the Council to the Forty-Fifth Anniversary Meeting of the Statistical Society	559—572
Proceedings of the Forty-Fifth Anniversary Meeting	573—578
On the Celtic Languages in the British Isles; a Statistical Survey. By E. G. RAVENSTEIN, Esq., F.R.G.S., &c.	579—636
Discussion on Mr. Ravenstein's Paper	636—643
On Tabular Analysis. By WILLIAM A. GUY, Esq., M.B., F.R.C.P., F.R.S., one of the Honorary Vice-Presidents of the Statistical Society	644—655
Discussion on Dr. Guy's Paper	656—662
On some Effects of a Crisis on the Banking Interest. By JOHN B. MARTIN, Esq., M.A.	663—700
Discussion on Mr. J. B. Martin's Paper	700—708

MISCELLANEA:—

I.—The <i>Gazette</i> Average Prices of Corn	709—723
II.—Miscellaneous Statistics of the United Kingdom.....	724—727
III.—Notes on Economical and Statistical Works.....	727—736
IV.—Additions to the Library, with Notes	736—749

December, 1879.

Agriculture in England and the United States. The Inaugural Address of THOMAS BRASSEY, Esq., M.P., PRESIDENT of the Statistical Society, delivered on Tuesday, the 18th of November, 1879.....	751—764
Proceedings on the 18th November, 1879	765—770

Address of the President of Section F, "Economic Science and Statistics," of the British Association, at the Forty-Ninth Meeting, held at Sheffield, in August, 1879. By G. SHAW-LEFEVRE, Esq., M.P.	771—783
---	---------

MISCELLANEA:—

I.—Statistics in Parliament	784—790
II.—The Agricultural Returns of 1879	790—808
III.—The Crops of 1879	808—816
IV.—The Increase in the Number of Banks and Branches	817—844
V.—The Conversion of Unlimited Banks into Limited	844—848
VI.—Influence of Prices on the Foreign Trade of France	848—857
VII.—Statistical Return of the Australasian Colonies	858, 859
VIII.—Notes on some of the Additions to the Library.....	860—873
IX.—Additions to the Library during the Quarter	873—882
INDEX to vol. xlii (1879)	883—909

JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1879.

- REPORTS ON:—1. *The FOURTH SESSION of the PERMANENT COMMISSION of the INTERNATIONAL STATISTICAL CONGRESS, held in PARIS, 10th—20th July, 1878.*
2. *The FIRST SESSION of the INTERNATIONAL CONGRESS of DEMOGRAPHY and MEDICAL GEOGRAPHY, held in PARIS, 5th—10th July, 1878.*
3. *The SECOND SESSION of the INTERNATIONAL PRISON CONGRESS, held in STOCKHOLM, 20th—27th August, 1878.*

By FREDERIC J. MOUAT, M.D., F.R.C.S., *Foreign Secretary and Delegate, Statistical Society.*

[Read before the Statistical Society, 17th December, 1878.]

HAVING been honoured by the Statistical Society with the duty of representing it in France and Sweden at the meetings above mentioned, according to custom, I now submit a brief report of the results of the deliberations at which I assisted, so far as they appear to me to be immediately connected with the mission intrusted to me as the delegate of the Society. That with which our work is most closely associated is undoubtedly the body devoted exclusively to statistical inquiry and research, hence I shall naturally assign most time and attention to its proceedings, particularly as there are some points connected with them on which I am desirous to raise a discussion, and to obtain the views of the Society.

In the report of the late Samuel Brown* reference is made to the creation of the permanent commission at St. Petersburg as the executive of the International Statistical Congress, to continue, harmonise, and give practical effect to its proceedings, and to promote a cordial union between the representatives of official statistics in different countries.

In my own reports† on the Buda-Pesth Congress, I also directed attention to this body, and suggested some changes in its constitution and procedure, which appeared to me to be desirable to enable it the better to fulfil the purposes of its creation.

* *Journal of the Statistical Society*, vol. xxxv, pp. 431—457.

† Vol. xxxix, pp. 628—647, and vol. xl, pp. 531—551.

The fourth session, held as above stated, was the first which was attended by English delegates, Mr. Giffen being the official representative of Great Britain, and your foreign secretary his unofficial colleague. The meeting was to have taken place in Rome, but, in consequence of the great attraction afforded by the Exhibition of 1878, Italy gave way to France, generously and wisely, for scientific men of all classes and nations were congregated at this great gathering of nations to witness the triumphs of peace and industry over the devastating effects of war and waste, and to hail the restoration to her high place in the world's esteem, of our gallant and accomplished neighbours.

The meetings were appropriately held in the Ministry of Agriculture and Commerce, to which is attached the general direction of statistics in France, and were attended by thirty delegates of different nations, and ten invited members, of whom one was the director of agriculture in Italy, and the nine others men of distinction, associated with statistics in different branches of the public administration in France. It had three presidents, MM. Keleti, de Semenow, and Deloche, the latter director of the general statistics of France, and four secretaries.

At the first meeting nine sub-committees were formed to deal respectively with the questions of organisation, agriculture, fine arts, the precious metals, exchange operations, civil law, classification of statistics, the historical statistics of great cities, and benefit societies, regarding all of which special proposals were submitted for consideration.

The real work of the session was done in these sub-committees, which laboured long and earnestly, from day to day, to complete the tasks assigned to them. Most of them presented reports of the results of their deliberations, which were read and discussed in the general assemblies. These are printed in the *procès-verbaux* of the meeting, and have already been distributed to all concerned, an example of promptitude and completeness deserving of special mention and approval.

Prior to the assembly of the commission, the programme of the matters submitted for consideration and discussion was drawn up and distributed by the president, M. Keleti. It contained the following list of agenda:—

1. Various proposals of the president concerning the organisation and working of the permanent commission.

2. Certain questions recommended to the attention of his colleagues by M. Keleti, to wit:—

- a. The creation of an international organ to serve as a medium of communication between the members of the commission, in the intervals of their meetings.

- b. The distribution of international statistical works.
- c. The time and place of the next meeting of the commission, and of the next session of the congress.
- d. The mode of nomination of special delegates or experts, by the commission.

3. A proposal from Dr. Lambl relative to statistics of depopulation or decrease of cattle.

4. A proposal of M. de Lubinsky touching the statistics of civil law.

5. A proposition of M. Maggiore Peoni for the collection of the historical statistics of great cities, chiefly in relation to their population, the cost of provisions, and the finances of those cities.

6. A series of propositions from Dr. Mouat respecting the constitution and programmes of the congresses, their working and their resolutions.

7. A proposal from Dr. Lorenz touching the possibility of having free discussions of questions which may arise, but which from their nature cannot find a place in the order of the day, either of the sections or of the general assembly.

Of my proposals those only were incidentally considered which had reference to the permanent commission. Questions relating to the congress were regarded as *ultra vires*, and were consequently not discussed.

In addition to the printed programme, a plan of an international statistical bibliography by M. Keleti, and a project of statistics of exchange operations by M. Poznanski, were printed and circulated. After the assembly of the commission, M. Deloche brought forward a scheme of classification of statistical facts in a general statistical record, a plan of international statistics of fine arts, and a new method of international agricultural statistics.

M. de Neuman-Spallart submitted a proposal regarding the international statistics of the precious metals, and M. Böhmert a proposition respecting the international statistics of benefit societies, with special reference to the participation of workmen in the products and ownership of industrial enterprises.

As mentioned above, sub-committees were appointed to consider each and all of the proposals presented, and the reports, drawn up after careful, and in some instances protracted discussion, were finally discussed by and embodied in resolutions of the general assembly of the permanent commission.

These resolutions were twenty-one in number, as follows:—

Resolution 1. The basis of an international statistical record of civil law, founded on the conclusions of a work presented to the Congress of Budapesth, shall be submitted to the next congress, with the addition of a section on the nationality of the parties engaged in each suit.

M. Yvernès (France) will draw up a memoir to the above effect, with

the aid, in regard to international law, of M. Dubois, Professor of Law at Nancy.

The report presented by M. Yvernès at Buda-Pesth is a monument of learning and research, and will afford an excellent basis for the record required.

Resolution 2. A nomenclature of crimes and misdemeanours, to be styled, Nomenclature of Infractions of the Criminal Law, shall be prepared and presented by M. Outine, chief of the Statistical Bureau of the Ministry of Justice in Russia.

Resolution 3. The scheme of classification of international statistics prepared by M. Deloche is adopted, and will be recommended to the next congress.

The scheme was considered by a sub-committee, consisting of MM. Deloche, Becker, Kummer, Engel, and Kiaerr, and was adopted without further discussion by the permanent commission.

As it is a matter of considerable importance to fix, if possible, a standard for general adoption in the publication of international statistical annuals, and as the proposal of M. Deloche does not appear to me to be one which can be successfully applied at present to the collection of the statistics of the British Empire at home and abroad, I shall produce *in extenso* the memoir of M. Deloche on the subject, for the consideration of this Society.

Resolution 4. The proposition of M. Poznanski (Russia) for the statistics of exchange operations is considered worthy of consideration, and will be brought before the next congress.

Resolution 5. M. Mayr (Bavaria) will prepare a programme for the international statistics of infirmities (blindness, deaf-mutism, mental aberration, &c.) for the next congress.

Resolution 6. The proposal of M. Böhmert (Saxony) regarding the statistics of benefit societies, &c., is adopted.

Resolution 7. The proposition of M. Maggiore Peoni (Italy) for the collection of the historical statistics of great cities is not adopted, in consequence of its impracticability.

Resolution 8. The international statistical record regarding public aid (or charity) is confided, as respects legislative measures concerning pauperism and mendicity, to Dr. Mouat (Great Britain), and for the remainder of the subject to Signor Bodio (Italy).

Resolution 9. The programme of the statistics of the fine arts presented by M. Deloche (France) shall be included in the series of desirable international statistics, and the duty of preparing a working scheme, to be submitted to all statistical bureaux, is entrusted to France.

Resolution 10. Dr. Engel (Prussia), who was charged, in conjunction with M. Hopf, to prepare the statistics of life assurance, having suggested the postponement of the work in consequence of the death of his colleague, it was undertaken by and assigned to M. Kummer (Switzerland).

Resolution 11. Dr. Lunier (France) is charged with the preparation of a programme of the statistics of alcoholism in relation to lunacy, crime, accidental deaths, &c., to be submitted to the commission at its next meeting.

Resolution 12. The proposition of M. de Neumann-Spallart (Austria) to collect international statistics of the precious metals is adopted in principle, and this gentleman will prepare the programme of the same for submission to the next commission.

Resolution 13. The formulary of M. Deloche (France) for a new interna-

tional statistic of agriculture shall be sent to the delegates of all Governments for consideration by their statistical chiefs, or in default of such by competent persons.

The replies and remarks received shall be made over to a special committee to prepare the definitive programme. The members of this committee are MM. Keleti (Hungary), de Neumann - Spallart (Austria), Meitzen (Germany), Giffen (England), Siedenbladh (Sweden), Jakchitich (Servia), Tisserand (France), Miraglia (Italy), with M. Loua, chief of the general statistical bureau of France, as secretary.

Resolution 14. The commission expresses a hope that each agricultural statistic shall be preceded by a notice on the geology, climate, &c., of the field of observation, prepared as near as possible to the time of taking the census.

Each Government shall be urged to publish annual statistical returns of harvests, accompanied by a statement of provisions generally.

Resolution 15. The project of a programme of international statistics of sericulture, presented by M. Miraglia (Italy) is adopted, and its execution is entrusted to the Italian Government.

Resolution 16. M. Chesson (France) is charged at the next congress to explain and support the views enunciated by him in his report on graphic statistical methods, illustrated at the Great Exhibition of 1878.

These were numerous, important, and included many branches of knowledge. They were explained personally by M. Chesson at the Exhibition, and he embodied his observations in a lucid report, printed in the record of the permanent commission.

In this he showed that methods, which were universal in their application, needed no knowledge of different languages, dispensed with the necessity of wading through and mastering overwhelming masses of figures, appealed equally to the scientific and the unskilled, and economised time in this age of rapid movement and life at high pressure, had become a necessity of the times in which we live. In his own eloquent words, graphic statistics are "the true universal tongue, and allow the learned of all countries freely to interchange their thoughts and their works, to the great advantage of knowledge itself."

At the same time he pointed out that much confusion existed at present from the absence of fixed standards, to determine which with some hope of success, he considered that the time had now arrived. While it would have been vain, and even wrong, to attempt to control and direct undisciplined efforts in the beginning of such means of illustration, and the many wild diversities, invented with varying ingenuity, were themselves an advantage, the time had come to determine the general principles which should regulate graphic methods, and to fix the forms which would apply to the various needs of statistical inquiry, without fettering statistes too closely in the selection of the fittest forms for their specific purposes. This contention M. Chesson will sustain at the next congress.

Resolution 17. Related to the composition, functions, and procedure of the permanent commission, which I have reproduced in detail elsewhere, and need not recapitulate here.

Resolution 18. The adhesion of a majority of Governments will be sufficient to stamp a definitive character on the decisions of the commission.

It is, I venture to think, much to be regretted that our Government does not take a more active part officially in such international proceedings. They have no political significance, deal with matters that are of considerable importance to all civilised nations, tend to throw light on many social and economic questions, in which most nations have something to learn from their neighbours, or to unlearn for themselves, are great aids to amicable international intercourse in its best and widest sense, and would have an important effect in dispelling the view generally entertained abroad that we English are a proud, selfish, unsympathetic people, governed by our material interests alone.

As individuals we are well and kindly received everywhere, and I must confess I am often humiliated when I consider how little we are able to reciprocate the attentions shown to us, in the way that would be most appreciated by our foreign friends and collaborateurs.

Resolution 19. Dating from 1879, the official organ (bulletin) of the permanent commission will publish an international bibliography of statistics. This bibliography shall contain all official statistical publications of which lists shall be furnished quarterly, or at least annually, by the heads of statistical departments who are members of the commission.

Resolution 20. The permanent commission shall at its next meeting examine the resolutions of the Congress of Buda-Pesth, in accordance with the provisions of the resolution of the Congress of St. Petersburg, and of the first article of its constitution as now determined.

Resolution 21. The fifth session of the permanent commission shall be held in Rome, in the month of October, 1879.

I have thus reproduced from the printed report of the commission the whole of the resolutions adopted. Most of them are of permanent interest, but can scarcely be considered of such pressing and immediate importance as to be fitted for discussion in this room. They indicate tolerably clearly some of the lines on which the statistics of all countries are now working, and point out several topics which might with advantage be included in the papers prepared for our Society, for which we possess a wealth of information that is well deserving of being carefully digested. I refer particularly to the statistics of agriculture, of the precious metals,* of human infirmities, lunacy and the like, of the working of the poor laws, and organisation of charity, of friendly societies, of labour and capital in relation to the best means of reconciling their conflicting interests, and similar topics.

The two resolutions that appear to me to interest us most nearly, and to be deserving of our special consideration, are those relating to the organisation and procedure of the permanent com-

* The reports on these two subjects were of great value, and corresponding merit.

mission, and to the best form of statistical annual for international purposes, and upon these I shall accordingly dwell at some length.

The sub-committee appointed to consider the former question, consisted of MM. Keleti, de Semenow, Deloche, Engel, Becker, Levasseur, and myself, and occupied several days in its discussion.

It was felt that upon the proper constitution and working of this body would depend, in a great measure, the future success of the congress itself, of which it constitutes the permanent executive. Its end and aim, and the reason for its existence, were correctly stated by M. Keleti to be, the "creation of international statistics."

It was clearly shown by a retrospect of the past history of the congress, that, in spite of the preparation of excellent reports by some of its most distinguished members, this object had not yet been attained. Of the twenty four categories into which the learned and laborious director of the Berlin bureau of statistics had arranged these inquiries, and which had been assigned to experts of different nations, but few had been worked out, the labour of ten years having accomplished but five of the number, so that, at this rate of progress, long before the entire task had been completed, the older reports would be altogether out of date, and much, if not most, of their interest be lost in the new and changed conditions which must then exist.

M. Yvernès was appointed reporter of the sub-committee, and by him in a brief introductory statement, the necessity of a more exact organisation of the commission was explained, and the reasons for each of the propositions adopted, were referred to.

As my proposals related rather to the organisation and working of the congress itself than of its executive, they were not specifically considered—but where they touched upon the organisation of the permanent commission, they were not altogether lost sight of—and although I am of opinion that the new organisation will remedy some of the defects which I ventured to point out, it contains one proposal, which so far as the congress is concerned, cannot I fear, work well.

M. Yvernès reported, and it was the general opinion of the sub-committee, that the parts to be taken respectively by the permanent and organising committees in the settlement of the programme of each congress should be, that the questions for discussion should be proposed and prepared by the former, and be finally determined by the latter. It is with much diffidence that I differ from my learned and experienced colleagues in the sub-committee on this point, but I do so because I feel tolerably sure that it will defeat one of the principal objects for which the permanent commission

has been created, and be productive of confusion and uncertainty in the deliberations of the congress itself.

The organising committee meets only on the eve of the assembly of the congress itself, hence if the definitive settlement of the programme rests upon it, and it possesses, in addition, the power of adding to as well as of subtracting from the questions drawn up by the permanent commission, there will not only be no time to circulate the settled programme to the members of the congress for consideration, but it will continue all the disadvantages of an *avant-congrès*, which the permanent commission was intended to replace and displace.

This alone is, in my humble judgment, fatal to it as a working measure. The careful study of the questions to be discussed, needs the circulation for some time previously of the reports drawn up regarding them. This is simply a physical impossibility if their determination is immediately to precede the meeting of the congress.

There can be no fear of local interests being overlooked or disregarded by the final determination of the programme being vested in the permanent commission. The place of meeting of each congress is fixed at least a year beforehand, and there is no great city in which it is likely to be held that has not one or more representatives on the permanent commission. To these might easily be assigned the task of ascertaining all local questions that would be of sufficient general interest to discuss; of procuring the preparation of proper notes regarding them, and of submitting them to the permanent commission in time to admit of their acceptance, if found fit, and of their being circulated as part of the programme at least six months before the meeting of the congress.

On the organising committee, which should be essentially a local body, should devolve the whole of the arrangements for the congress, except the preparation of the programme, and to it should likewise be assigned the preparation and publication of the *compte rendu*.

The following statutes of the permanent commission were drawn up by the sub-committee, and adopted by the commission:—

FUNCTIONS OF THE COMMISSION.

Article 1.

The object of this commission is:

(a) In the interval of the sessions of the congress, to take action on the resolutions adopted, and to devise the steps necessary to carry them into effect, so far as may be practicable, in each country.

Every member of the commission who has any remarks to make or amendments to propose with a view to facilitate the practical adoption of these resolutions, should write out his remarks or amendments and send them to the President of the Permanent Commission, in the first half of the year following the meeting of the congress. The president collects the changes proposed, and embodies them in

a programme, which is communicated to all the members to enable each to consider them with a full knowledge of their exact purport.

(b) To prepare collective international works of the nature of those indicated by the congress held at the Hague; to determine all questions having reference to the execution of these works, and to draw up the programme relating to them; to carry out international inquiries, and to seek to assimilate statistical publications so far as may be needed for the formation of international statistics.

(c) To propose and prepare the questions for the programme of each congress. The reporters named by the commission must send in their essays at least six months before the meeting of the congress. *The organising committee regulates the final adoption of the questions submitted by the permanent commission, and may add to them fresh subjects for consideration.**

(d) To publish a bulletin to be entitled the "Bulletin of the Permanent Commission of the International Congress." The publication to be in the French language, and to appear quarterly. Its preparation is entrusted to a member of the permanent commission, appointed by itself at the first meeting following each session of the congress. This bulletin shall be on sale. The first number shall appear in January, 1879.

Temporary arrangement: *The permanent commission, at its first sitting, shall appoint the person† to be charged with the preparation of the bulletin until the meeting which will follow the next congress. The first number will appear in the first quarter of 1879. The subscription cost is provisionally fixed at 10 frs.*

COMPOSITION OF THE COMMISSION.

Article 2.

The members of the permanent commission are:—

(a) The heads or members of the different official statistical services of each country, delegated by their Governments.

(b) The delegates of the statistical administrations of those great cities to which any part of preparation of international statistics has been assigned.

(c) Delegates of scientific societies, or others invited by the permanent commission to assist in their labour.

(d) Persons specially nominated by the permanent commission.

Article 3.

The permanent commission is empowered to associate with itself experts, either by its own initiative, or on the demand of the congress, or on the requisition of Governments, or scientific institutions by which an exhaustive study by the congress of any special question may be desired.

Article 4.

The permanent commission can likewise create special committees, sub-committees, or assemblages of experts, and determine the nature of their work, as well as the duration of their commission. These special committees or sub-committees shall meet on the dates and at the places appointed by the permanent commission, and shall furnish a report on the questions submitted to them for examination.

BUREAU.

Article 5.

The president of the permanent commission is, from one congress to another, the organiser of the last session. Former presidents of the commission remain, by

* The *italics* are mine.—F. J. M.

† M. Deloche was appointed to this office.

right of office, presidents with full powers (*presidents adjoints*). The president appoints the secretary.

MEETINGS.

Article 6.

The permanent commission meets at least once between two general sessions of the congress.

Article 7.

The president of the permanent commission shall prepare a preliminary programme, and after consultation with the members, to whom it shall be submitted, shall determine the definitive programme, which shall be submitted for discussion to the commission in session.

Article 8.

Every proposition intended for discussion must emanate directly from, or be submitted through a member of the commission. It must be addressed in writing to the president in the first six months of each year.

RESOLUTIONS.

Article 9.

The resolutions of the commission are determined by a show of hands; but when they carry with them obligations for the heads of statistical administrations, the votes are taken by bulletin (voting papers), bearing the name and country of the voter.

OBLIGATIONS OF STATISTICAL CHIEFS.

Article 10.

The heads of statistical departments who are members of the permanent commissions are morally bound, as far as possible, to give effect to the views of their colleagues in the commission, relating to all international statistical work undertaken by virtue of the decisions of the commissions.

They are also bound to make the president of the permanent commission acquainted with the decision of their Governments as to the execution of the measures proposed by the commission.

REPORT OF THE PROCEEDINGS.

Article 11.

At each session of the congress the permanent commission submits a report of its proceedings, either by its president, or by a reporter appointed by the commission.

INTERNATIONAL ANNUAL.

Article 12.

The permanent commission reserves to itself the right to create and draw up a year book of international statistics, containing the most important facts relating to different States and their principal dependencies, carried on in the same form for a series of years.

There is some danger of such a publication becoming a rival of, and even to a great extent displacing such valuable annuals as the "Statesman's Year Book," the "Gotha Almanac," and some of the statistical annuals, prepared and published by private enter-

prise, and much and justly valued as standard works of reference. This may, however, be easily avoided, by keeping the International Statistical Annual strictly to its purpose of an authoritative collection of facts represented by figures, without any of the collateral and subsidiary information contained in all other publications of similar character. Such a record, stamped with the authority of the responsible statistical authorities of each country, would be invaluable for permanent record and reference, and for all legislative and similar purposes for which reliable statistics are a necessity.

TEMPORARY ARRANGEMENT.

To effect this the permanent commission engages each of the members, who undertakes a part of international statistical work :—

(a) To seek, for the part which concerns him, the minimum required for a succinct annual of international statistics.

(b) To present at the next meeting of the commission a carefully considered note on this minimum.

Whilst awaiting the realisation of these data, the permanent commission invites those members who are to take part in the work to prepare for publication in the bulletin [*d*, Section 2] sketches of the statistics of their countries of the nature above-mentioned, to form the tables (annexes) of the said bulletin. These tables shall be printed at the cost of the author, or of the country to which they relate.

LIBRARY AND ARCHIVES OF THE COMMISSION.

Article 13.

A library and the archives of the commission is established at the place of preparation of the bulletin.

The library shall consist of presents of works and journals made by members of the commission, or by any other person.

The receipt of all such donations shall be acknowledged in the bulletin.

Special regulations shall be framed for the formation and preservation of this library.

In the archives of the permanent commission should be found :—

(a) All formularies in practical use in official statistical offices, demi-official, or private of different countries.

(b) Copies of all relating to graphic statistics.

Whenever these latter are neither printed nor authenticated, the members of the permanent commission are invited to have a copy made as soon as possible, so that the archives may possess all cartograms, diagrams, and chronograms relating to statistics.

All presents for the library and archives must be sent free of cost.

GENERAL PROVISIONAL ARRANGEMENTS.

Article 14.

The members of the permanent commission engage to submit, as early as possible, these resolutions for the approval of their respective Governments. They will make known their decisions to the president of the permanent commission before the end of October, 1878, who will communicate the same to the editor of the bulletin, in order that the first number may appear in the first quarter of 1879.

Thus it will be seen that the determination of the functions of the organising as distinguished from the permanent commission, was not taken into consideration, the latter being probably regarded as a part of the congress itself, and, as such, beyond the powers of the meeting in Paris. I still remain of opinion, however, that it is most desirable for this question to be settled before the meeting of the tenth congress, wherever it may be held, and that the proper body to deal with it is the executive of the congress, which is the permanent commission, otherwise the difficulties experienced at Buda-Pesth will recur, and all the disadvantages of an *avant-congrès* be renewed.

In accordance with the provision of Section 2 (a) of the new statutes, I shall submit a proposal to this effect to the President of the Commission in the early part of next year, for consideration at the meeting to be held in Rome in October next.

Statistical Annual.

Before entering upon an exposition of his own views on the subject of a scientific arrangement of international statistics for annual publication, M. Deloche submitted the following outline of the arrangements already adopted in the statistical annuals of the countries mentioned:—

STATISTICAL ANNUAL OF AUSTRIA.

1. Superficies, population, dwelling places, movement of population.
2. Rural economy, cattle, market prices, extractive industry.
3. Manufacturing industry, commerce.
4. Railways, roads, river and sea navigation, postal communication, telegraphs.
5. Clergy, educational institutions, periodic press.
6. Civil and criminal justice, contraventions in fiscal matters (revenue defaulters).
7. Administration in the name of the State, the public debt, funds for the reduction of territorial and funded property, communal administration.
8. Associations (joint stock share companies), banks and credit institutions, sale of property and mortgages.
9. Savings banks.
10. Hygienic and charitable institutions, statistics of fires.
11. Army and navy.

STATISTICAL ANNUAL OF HUNGARY.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Movement of the population. 2. Rural economy. 3. Mines. 4. Movement of commerce, and market prices. 5. Modes of communication. | <ol style="list-style-type: none"> 6. Fires. 7. Public health. 8. Justice. 9. Worship and public instruction. 10. State administration (Government). |
|---|---|

It is difficult to see what need there was for a different arrangement of the statistics of the empire, and of the kingdom united to

it, as neither possesses colonies or other off-shoots tending to show a plausible ground for different treatment in such matters.

STATISTICAL ANNUAL OF BELGIUM.

FIRST DIVISION.—*Territory and Population.*

- | | | |
|---------------|--|----------------|
| 1. Territory. | \| | 2. Population. |
|---------------|--|----------------|

SECOND DIVISION.—*Political, Moral, and Intellectual State.*

- | | | |
|-------------------------------|--|------------------------------|
| 1. General elections. | \| | 9. Worship. |
| 2. Provincial elections. | \| | 10. Medicine. |
| 3. Communal elections. | \| | 11. Benevolent institutions. |
| 4. Provincial administration. | \| | 12. Civil justice. |
| 5. Criminal administration. | \| | 13. Criminal justice. |
| 6. Primary instruction. | \| | 14. Civil guards. |
| 7. Higher education. | \| | 15. Militia. |
| 8. Letters and fine arts. | \| | 16. Army. |

THIRD DIVISION.—*Agriculture, Industry, and Commerce.*

- | | | |
|-----------------|--|--|
| 1. Agriculture. | \| | 4. Banks, financial institutions, mints. |
| 2. Industry. | \| | 5. Means of communication. |
| 3. Commerce. | \| | 6. Post-offices, telegraphs. |

STATISTICAL ANNUAL OF ITALY.

1. Topography and hydrography.
2. Meteorology.
3. Population, census, movement of population.
4. Army.
5. Navy.
6. Public work, telegraphs, post offices, roads and railways.
7. Finances of the State.
8. Ecclesiastical government and revenues.
9. Communal and provincial finances.
10. Instruction.
11. Justice.
12. Prisons and penitentiary establishments.
13. Charitable institutions.
14. Navigation (movement of shipping in all parts of the Kingdom).
15. Commerce.
16. Statistics of animals used in agriculture, horses, mules, asses, bovine animals, sheep, goats, pigs.
17. Agriculture.
18. Money (mints), credit, commercial associations.
19. Emigration.
20. Communal administrative elections, general political elections.

STATISTICAL ANNUAL OF PRUSSIA.

FIRST PART.

Basis of the National Power.

- | | | |
|--------------------------------|--|------------------------------------|
| 1. The territory of the State. | \| | 2. Population, state and movement. |
|--------------------------------|--|------------------------------------|

SECOND PART.

Political Economy and Administration.

1. The labouring population.
2. Societies and industrial (corporate) associations.

3. Funded property.
4. Rural economy, breeds of cattle, woods and forests, chase, fisheries.
5. Factories, salt-works and forges.
6. Manufacturing industry.
7. Public works.
8. Circulation.
9. Commerce.
10. Money and credit institutions.
11. Chambers of commerce, professional associations.
12. Assurances.
13. Public and private charitable and friendly establishments.

THIRD PART.

1. State and organisation of education.
2. The church and religious offices.
3. Public health.
4. Arts and sciences.
5. Administration of justice.
6. Financial administration.
7. Land and sea forces.
8. Legislative powers.
9. Statistics of the finances of arrondissements and provincial districts.

STATISTICAL ANNUAL OF FRANCE.

1. Territory and population.
2. Movement of the population in relation to marriages, births, and deaths (état civil).
3. Public worship.
4. Criminal justice.
5. Civil and commercial justice.
6. Prisons and penitentiary establishments.
7. Assistance publique, charity organisation (bureaux de bienfaisance), hospitals and asylums, pauper children (in asylums and boarded out), lunatic asylums.
8. Benefit societies.
9. Public institutions.
10. Fine arts.
11. Electoral statistics.
12. Recruiting of the army.
13. Effective force and health of the army.
14. Agriculture.
15. Horses and studs.
16. Industry.
17. Professions and salaries.
18. Sea fisheries.
19. Highways, circulation.
20. Commerce and navigation.
21. Octrois or town dues, articles consumed (bread and wine, alcohol, drinks and liquids, oil, vinegar, butchers' meats).
22. Finances and taxes.
23. Casualties and losses (fires, agricultural losses from hail, frost, inundations, loss of cattle, shipwrecks, and means of saving life).
24. Assurances.
25. Algeria.
26. Colonies and French possessions.

Of our English annual official publications M. Deloche gave no

record, and yet our parliamentary returns are the oldest of all such national records, the statistical abstract of the United Kingdom being in the twenty-fifth year of its existence, that of the colonies in its fourteenth year, and of India in its twelfth year.

In addition to the above, there are published from time to time what are termed the miscellaneous statistics of the United Kingdom, which contain a large body of statistical facts of the greatest interest and importance. The last which I have seen, that numbered as IX, and promulgated by the Board of Trade in 1876,* gives a summary of contents, arranged in alphabetical order, under no less than fifty-three separate heads. In the return itself each of these heads is subdivided into branches, often several in number, conveniently arranged and indexed for reference, but on no fixed or scientific basis.

In 1877 was printed, by order of the House of Commons, a return termed "arrangements of the papers presented by order of the House of Commons and of the papers presented by command, Sess. 1877, 21st Parliament, 4th Sess., 40 and 41 Vict.," in ninety-three volumes. The index of those annually presented to Parliament occupies four folio pages, and shows what a mass of information of more or less statistical value, is from year to year placed on record in our public returns.

In 1834, Parliament sanctioned, on the recommendation of a Select Committee of the House of Commons, the publication of "A Digest of all the Accounts relating to Population, Productions, Revenues, Financial Operations, Manufactures, Shipping, Colonies, Commerce, &c., &c., in the United Kingdom of Great Britain and Ireland, diffused through 600 volumes of journals, reports, and papers presented to Parliament during the last thirty-five years." This was arranged in two parts, by Mr. J. Marshall, with an excellent index, and contained a fair abstract of much information on some of the subjects treated with respect to Russia, Prussia, the Netherlands, Germany, Spain, and Portugal, the United States of North America, and China, containing in "every line a lesson, every page a history."

It would be difficult to adduce a better proof that we have not been idle in collecting materials for legislative and other purposes by the numerical method.

The parliamentary publications which most nearly resemble the *annuaires* quoted by M. Deloche are our statistical annuals, which are termed "statistical abstracts."

Of these there are three published by the statistical department

* A special Statistical Department was created in the Board of Trade in 1832, and placed in charge of the late Mr. G. R. Porter, whose works are well and widely known.

of the Board of Trade, and one by the India Office. Those for the British Empire are arranged in tables under the following heads:—

United Kingdom.	Colonial and Other Possessions.	British India.
1 to 12. Public and Local Revenue and Expenditure, National Debt, Assessments to Income Tax, Customs, Tariffs, &c.	1. Area and Population	1 to 19. Area and Population
13 and 14. Imports and Exports	2. Revenue	20 to 37. Revenue and Expenditure, Debts and Obligations, Cash Balances, &c., Provincial and Local Finance, Municipalities
15 to 21. Imports	3. Expenditure	38 to 43. Shipping
22 „ 29. Exports	4. Public Debt	44 and 45. Imports
30 and 31. Bullion	5. Shipping	46 to 49. Exports
32 to 35. Transhipments	6. Imports	54 „ 56. Government Stores, &c.
36 „ 42. Shipping	7. Exports	57 to 60 Gold and Silver
43 and 44. Excise	8. Banks	61. Customs Tariff
45 „ 46. Prices and sale of Corn.	9. Railways	63. Coinage
47. Acreage under Crops, and Number of Live Stock	10. Agriculture	64 to 68. Paper Currency Department
48. Coinage	11. Births, Marriages, and Deaths (Australian Colonies)	69. Emigrants
49. Savings Banks under the Post Office	12. Meteorology	70 to 79. Guaranteed and State Railways
50. Savings Banks under Trustees	13. Import Duties	80 to 83. Public Works
51 to 57. Bank of England	14. Export „	84. Telegraphs
58 to 61. Post Office	<i>Note.</i> —The details are subdivided into different groups, and are for different periods	85 to 92. Post Offices
62. Population		93 „ 98. Army
63. Births, Marriages, and Deaths		99 and 100. Education
64 and 65. Education		101. Publications
66 to 69. Paupers		102. Vaccination
70. Crime		103 and 104. Wild Beasts
71. Emigrants		<i>Note.</i> —The area and population are according to the last census returns. The revenue and expenditure for ten years, 1868-77
72. Railways		
73. Mines		
<i>Note.</i> —Under each head the abstract is given for the last fifteen years		

In the essay which M. Deloche prepared for the permanent commission, “On the method to follow for the classification of “different statistics in a collective international statistical work,” he stated that the different modes of classification adopted in the countries quoted by him, were striking and much to be regretted. As before mentioned, he took no notice of the English statistical abstracts above referred to.

He continued, “It has become indispensable to put an end to “this diversity, and to determine a uniform method of procedure,

“either by selecting from among the systems in use, or in adopting a new plan. Such a resolution falls well within the scope of the International Statistical Congress, perhaps even of the permanent commission, which according to the terms of its institution at St. Petersburg was particularly enjoined to assimilate statistical publications in different countries so far as is necessary for the formation of international statistics.”

M. Deloche continued, “It is abundantly manifest that the general classification of statistical facts has a very close connection with international statistics.

“There is, in truth, much interest in connecting collective works by a link which, while it assists the memory and forms a general table, binds them together naturally and logically, instead of in an arbitrary and changeable manner.

“This essential bond can only be found in a higher fixed principle, such as that of the human organisation, and this is the principle which I employed in arranging the heads of the statistical annual of France. It is not therein expressly formulated, nor is it immediately obvious, neither is it applied in a rigorous manner so as to embody the ideal of my conception. Indeed this application was the more unrealisable, in that the annual, notwithstanding its bulk and the number of subjects it contained, did not contain them all.”

Accordingly he submitted for the consideration of the commission a form of classification on a scientific basis, with the following explanatory introduction:—

I.

In collecting, co-ordinating, and presenting to the public in a tabular form the acts by which the life of a nation is manifested, the place occupied by that nation must first be determined, the extent and configuration of its territory, its hydrography, meteorology, &c.

Following territory comes population in the aggregate, its divisions by sex, social condition, and movements.

Territory and population thus form a double synthesis, of which the land is the stage, and the people the actors.

This then forms the basis and point of departure of all the other acts and facts.

II.

Passing to the study of the many and varied facts by which human activity is manifested, we observe that, according to their nature, they attach themselves to the order of faculties as they exist in man. These faculties, in the order of their superiority, are the *moral*, the *intellectual*, and the *physical* faculties.

“ From the moral principle or faculty emanates our ideas of right, of justice, and of injustice (or law, right and wrong), of good and of evil; the idea of divinity or the ultra-natural, and the relations of man to his Maker; that of the duties of charity, of man to his fellows.

“ To this order of faculties, ideas, and duties, belong :—

“ 1. Public worship and ecclesiastical teaching, the personnel and hierarchy, religious establishments and properties.

“ 2. Civil and criminal justice.

“ 3. Prisons and penitentiaries to punish and reform.

“ 4. Public assistance and benefit societies.”

III.

To the intellectual faculties belong :—

1. Instruction in its different degrees; primary and secondary instruction, and the higher education in letters and science.

2. The production of works of literature, science and erudition.

3. The fine arts, instruction in the plastic arts (painting, sculpture, architecture, engraving, &c.); and metaphysical arts, such as music; the production of works of arts of all kinds, museums, art exhibitions, and theatres.

IV.

To the physical faculties, and intelligence applied to matter, belong :—

1. Agriculture, agricultural instruction and production, farm animals, horses and studs.

2. Lands with and lands without buildings; the state of property.

3. Extractive and manufacturing industry; professional instruction, sea and river fishing.

4. Professions and salaries.

5. Modes of communication of all kinds, instruments of production and exchange.

6. Public works in towns (highways, squares, drains, water supply, lighting, &c.)

7. The circulation of men, of things, of valuables, and of thought; post offices and telegraphs.

8. Credit institutions, the auxiliaries of agriculture, of industry, and of commerce.

9. Accidents and assurances.

V.

Political and general administration, taken in their most extended application, have relations with the three orders of

faculties above mentioned, and to their different modes of application, which are:—

1. To preserve peace and order at home, to cause justice to prevail, to protect the weak and the poor, to watch over public morals, and to raise their tone.

2. To develop prosperity, to secure safety, and watch over public health, to assure the feeding and well-being of the people.

3. To secure abroad safety, dignity, and the national interests.

Under the double title of politics and administration, fall:—

1. The political *régime*, or rule, its principal organs, assemblies, electoral system.

2. The general administration, the division of administrative powers among the ministers, their organs and agents of every rank in the capital, in the provinces or departments, and in the communes or inferior districts.

3. Assemblies, provincial or departmental, communal or local, their modes of election and nomination; their powers and functions.

4. The army, recruiting, special schools of military instruction, military establishments (arsenals, barracks, hospitals, artillery ranges, &c.), military material and *hygiène*.

5. The navy, its recruiting, special schools, ports, its wood and coal dépôts, workshops, different establishments (arsenals, hospitals), its *hygiène*.

The finances are thus divided:—

A. Finances of the State, budgets of receipts and expenditure; taxes of all kinds, and revenues of State property; State banks; *caisses de dépôts*, mints.

B. Finances of the provinces or departments; contribution and revenues of the provinces, &c.

C. Finances of the communes or inferior districts; octrois or excise duties, and local taxes, revenues.

To fulfil this manifold task, the State and all administrations subordinate to it must have resources. These resources are of two kinds; taxes of all sorts, and the revenues of State property throughout the country. Here then the finances and the budget arrange themselves in their orders, to which belong the State banks, deposit offices, and mints.

VI.

The colonies or possessions separated from the State, ends the series of matters to be recorded. These have been placed apart, first, because many nations having no colonies, this portion of statistical record is not of universal application; and second, because in relation to many of the most considerable colonies

beyond seas, the above mentioned heads of statistics are found in whole or in part, and, in so far, reduce the institutions and vital functions of the metropolis. Hence it is requisite to give them a distinct position to admit of these statistics being treated in their respective conditions of existence.

For the above reasons M. Deloche deems it advisable for international annual statistical statements to adopt the following classification :—

I.

The double synthesis of the territory and its population.

1. The territory (topography, geology, hydrography, meteorology).
2. Census and movement of population.

II.

Facts relating to the exercise of the moral faculties.

1. Religion.
2. Criminal and civil justice.
3. Prisons and penitentiary establishments.
4. Public aid.
5. Benefit societies.

III.

Facts relating to the exercise of the intellectual faculties.

1. The three degrees of public instruction.
2. Literary and scientific productions, printing, books, libraries, scientific and archæological museums ; newspapers and reviews.
3. The fine arts.

IV.

Facts relating to the application of the physical faculties, and of the intellectual faculties to natural objects.

1. Agriculture.
2. Lands built upon, and land without buildings.
3. Extractive and manufacturing industry. Fisheries.
4. Professions and salaries.
5. Means of communication.
6. Commerce and navigation.
7. Public works, public health, and the food supplies of towns.
8. The circulation of men, of things, of valuables, and of thought. Post offices and telegraphs.
9. Credit institutions (except State banks).
10. Accidents and assurances.

V.

Facts common to the three above-mentioned orders of faculties.

1. Political rule, its organs and assemblies.
2. General administration.
3. The administrations and assemblies of provinces, departments, districts, communes, and minor subdivisions.
4. The army.
5. The navy.

VI.

1. The finances of the State.
2. The finances of provinces or departments.
3. The finances of communes or inferior districts. Town dues and articles consumed.
4. State banks—*les caisses de dépôts**—mints.

VII.

1. Colonies or extra continental possessions.

Such is the scientific scheme suggested by M. Deloche for universal adoption. A careful consideration of it shows that, in my humble judgment, scientific classification is at present impracticable, for I doubt if there would be any approach to general consent either as to the divisions themselves, or to the subdivisions of the subjects placed in each. M. Deloche's fifth division, in which facts are grouped which belong more or less to all the human faculties, seem to me to be fatal to his plan as a concrete scheme.

That some general form of arrangement which is not of a speculative character, and which admits of facts being grouped in regular order for international purposes, is undoubtedly desirable, and appears to me to be perfectly practicable.

The conditions to be observed in the arrangement are simplicity, facility of reference, completeness, and adaptability to all countries and circumstances. In our English plan there is evidently a rough idea of logical sequence, but no pretence of scientific basis.

In the conflict of opinion among the eminent experts who have prepared the annuals of Austria and Hungary, Belgium, Italy, Prussia, and France, each in the first year of its new existence, it is extremely difficult to decide as to the best method, yet it would not be impossible to show that there are some categories of statistical facts for which no fit place could be found under any of the heads mentioned by them. The classification of M. Deloche is un-

* Deposit offices created in 1816, to receive and distribute the funds arising from judicial consignments, security moneys, voluntary deposits, &c., and to administer pensions and retiring funds.—LITRÉ.

doubtedly the best attempt yet made to reduce to order and precision that which is at present deficient in both those qualifications, but, the scientific treatment of statistics is still absolutely in its infancy; and as we must crawl before we can walk, and walk before we can run, would it not be better in the first instance to agree to some simple, unpretending general arrangement sufficient for present purposes, carry it on for, say one lustrum, carefully watch over it, detect its defects, subject them to careful scrutiny and discussion by the permanent commission, and change only whenever the process of analysis and deduction shows change to be advantageous and necessary. The changes agreed upon should be general and simultaneous, and not proposed lightly; for those only who have had to collect, group, and analyse the multitude of separate facts from which any accurate statistical table is constructed, know how hard it is to get the minor workers to understand and fill in correctly the simplest forms, and how hopeless would be the confusion resulting from any alteration that was in the least degree difficult to understand, or which needed special interpretation.

I beg, therefore to suggest for the consideration of the Society the question, What is the best form of statistical annual for international purposes?

I propose for consideration the following arrangement, not as attaching any special value to it, but as a basis for discussion.

I would divide all statistical annuals into four parts:—1st, Territory and population; 2nd, Revenue and commerce; 3rd, Laws and government; and 4th, Miscellaneous statistics.

In the first division I would place all geographical and demographic statistics, including areas, soils, climates, possessions, and territorial arrangements, movements and divisions of population, and the purely social arrangements, such as trades, professions, &c., everything, for example, contained in the registrar-general's returns, and what is beginning to be known as sociology generally.

In the second part I would include all the sources of the collection, production, and distribution of wealth, the statistics of the precious and other metals, and all facts relating to the use and abuse of money, exchange operations, all manufactures and industries, and commerce in its widest sense, including means of transport, navigation, &c., &c.

In the third division should be all relating to legislation and the policy of nations, which would include the making and breaking of laws, the constitution of imperial and local governing bodies, armies, navies, police forces, and the like; education and religion, and all facts tending to show the state of civilisation of each nation as distinguished from other nations.

In my miscellaneous statistics I would put all statistics for

which I could find no exact position in either of the three first divisions, and these I would arrange alphabetically.

I have not attempted to work out such a scheme in detail, for neither time nor space would admit of its condensation into a reasonable compass. I do not claim for it any scientific precision, in fact I submit it simply as a suggestion to be dealt with by those more competent to consider and determine such questions than I can profess to be. It is very right I think that England should have a voice in the determination of these questions, and the time has I believe arrived to attempt to introduce some degree of order and arrangement into the vast mass of facts represented by figures which we are ourselves collecting, until their very abundance is proving a source of embarrassment and confusion.

All statistics of colonies and possessions of the British Empire should, I am of opinion, be arranged on a uniform system, that of the mother country being adopted as the standard.

International Congress of Demography and Medical Geography.

The International Congress of Demography and Medical Geography was held in the Palace of the Trocadéro from the 4th to the 9th of July, and was one of very many similar gatherings called into being by the Exhibition of the present year. While it was doubtless judicious to take advantage of such an occasion to bring together men of many nations to discuss the scientific relations of social and other questions which are cosmopolitan in character, it is undeniable that the very nature of the occasion was not favourable to the calm investigation and thoughtful discussion of such matters as need careful preliminary consideration and study.

From the unavoidable rapidity with which this congress was organised, no preliminary programme was published, and no account of the work accomplished was prepared and circulated from day to day, so that the discussions, although excellent in themselves, were of necessity somewhat discursive and difficult to report.

The exact nature of the congress itself was not strictly defined. Demography itself is a somewhat new term, of which the exact significance does not appear as yet to be very clearly established. It is not to be found in the sixth edition of the dictionary of the Academy, but in Littré's great work it is termed "a didactic expression: descriptive of peoples as regards the population considered in relation to ages, professions, dwellings, &c." It is also defined as the "natural history of society." It is, in fact, a branch of statistics specially devoted to questions of population.

In his eloquent introductory address, the Honorary President, M. Levasseur, said, "Different names are given to the study in which we are engaged; *statistics, demography, demology, and theory*

“ of population. For my part I attach more importance to things than to words.” After showing in what sense the term is preferable to statistics, which embraces the numerical study of *all* social facts, while this is confined to a fixed and restricted field, M. Levasseur vindicates the claim of demography to a place in the ranks of science, on the following grounds:—

“ A science is characterised and limited by its object. There is a science of physics, because there is a science of distinct phenomena and of special causes, which constitute the movement of matter. There is a geology, because there is a particular order of facts which regard the constitution of the crust of the earth. Wherever there is an order of distinct phenomena, there is a place for a distinct science.”

“ On this ground demography is a science. It stands apart from statistics, which supplies it with methods and the results of its enumerations and constants, and of which it may perhaps be considered the most important branch. But it does not include the varied objects of statistics: it has but one, population, which it studies at rest and in movement, and from these it deduces scientific conclusions as to the laws which govern human life in association.”

The actual President, Dr. Bertillon, defined it somewhat more closely as dealing with the inner life of the social bodies which form a people (births, deaths, marriages, migrations), but only in their collective influence, a result of which it measures the power of the parts, or of the whole, without meddling with biological proceedings, which distinguish it from physiology.

Definitions have at all times been regarded as the stumbling blocks of philosophy. I shall not attempt, therefore, to reconcile these views, or to justify the somewhat alarming elasticity given to this special branch of statistics by the proceedings of the congress. The matters submitted for consideration were, census operations, registers of populations, registration of social facts (*actes de l'état civil*), and medical records of births and deaths, the still-born, methods of calculating mortality, military statistics, organisation of statistical bureaux, scheme of recapitulatory demographic record in each country, migration, and a programme of instruction in demography.

To this was added medical geography. It was manifestly impossible to treat such an array of subject exhaustively in so limited a period, and without very careful preparation.

There is likewise always a tendency in discussions of which the objects are not clearly defined and understood, to dwell too much upon particulars, and to avoid general principles and comprehensive views, and this was somewhat the case in the congress of which

I am speaking. The discussions were nevertheless full of interest, and when published will add much to our knowledge of a very important branch of statistics.

The two first days were devoted to the determination of an exact system of taking a census, and to establish the importance of correct registers of populations.

The various plans in use in England, Germany, Belgium, Holland, Italy, Sweden, and Norway were mentioned. That of England was considered the plan most widely adopted, and that of Germany the most exact but most costly. The French system of spreading the census over one or two months, and confiding it to a practically irresponsible agency, was generally condemned as defective in principle and unreliable in execution.

The exact registration of the causes of death was then considered in considerable detail, and its delicacy and difficulty made manifest. The plans in use in Berlin, Hamburg and Brussels were particularly referred to and approved.

An equally important and not less pertinent discussion took place regarding the still-born, and valuable contributions to our knowledge of the subject were made by Dr. Bertillon, and M. Kummer the director of statistics in Switzerland.

The unfavourable influence of female (especially night) labour in factories during the period of gestation on infant mortality was dwelt upon, as well as several other collateral phases (legitimacy and illegitimacy) of the same question, which is one of great practical importance in all our manufacturing and industrial districts.

An interesting memoir on Algerian statistics, with graphic illustrations, was read by Dr. Ricoux, and a particularly valuable and learned discourse on the laws of mortality was given by Professor Alexis, of Fribourg.

Lastly, the subject of the teaching of demography, of which there is a professorship in Paris, well and worthily filled by Dr. Bertillon, was discussed.

A handsome bronze medal, as a memorial of the congress, has been presented to this Society, and the members were so well satisfied with the success of their first meeting, as to form a permanent commission for further gatherings for the same purpose.

There is no doubt a wide and ample field open for the statistical investigation of questions of population, whether or not demography is entitled to a special place among recognized sciences, and by a process of fissiparous generation, to separate itself from the general body of statistics.

International Prison Congress.

At the International Prison Congress, held in Stockholm, from

the 18th to the 20th of August, to which I was likewise accredited as your representative, the only question considered which had reference to the special work of the Statistical Society, was that of international penitentiary statistics.

The discussion of the question was based upon an excellent report prepared by M. Yvernès, upon the formulary most desirable to adopt for international purposes. That skilled and accomplished statistician began by stating that a plan applicable to all countries was, at all events at present, impracticable; and after a brief recapitulation of the efforts already made in this direction, proceeded to sketch a general plan of procedure under three heads, viz.:—

- (a) The administrative, regulating, and economic relations of prisons.
- (b) The penal system adopted in regard to the scale of punishments, and criminal responsibility in relation to age, pardons, conditional liberation, &c.; and
- (c) An account of the buildings and enclosures of each prison.

He then gave in considerable detail the exact heads of information that would be required in each of those branches of record. M. Yvernès added, that to obtain exact information as to the corrective and preventive effects of any system of prison discipline, recourse must be had to the statistics of the administration of the criminal laws, and, in particular, to a careful and exact record of recommitments and relapses.

In all these respects I have little to add to the paper which I read before the Society in February, 1876,* and to one which I prepared for, but which was not submitted to the first prison congress held in London in 1872. The information required, so far as each prison is concerned, should be contained in the descriptive roll of the prisoner, or in his penal record as it is termed in the convict prisons department of Great Britain. This, with its explanatory documents, is as full and complete as need be, and from these records, now that the whole of the prisons of the country have been placed under the control of the Home Office, may easily be compiled in the central office, and in a tabular form, a complete abstract of the penitentiary statistics of the kingdom. An equally well-digested system of police and judicial records, and of the action of prisoners' aid societies, would of course be necessary to render the prison returns complete, and from them to afford the materials for legislative action with regard to the prevention, detection, and punishment of crime.

The Congress at Stockholm appointed a sub-committee to consider the matter, and to submit a definite resolution on the subject

* *Journal of the Statistical Society*, vol. xxxix, pp. 311—331.

for the votes of the general assembly. This committee, composed of a member from each of the nationalities represented, prudently refrained from attempting to draw up an international formulary, and adopted a general resolution—which received the assent of the congress—leaving it to each to devise its own formulary, based upon its prison system.

The resolution referred to is subjoined:—

1. International penitentiary statistics should be continued on the method adopted in 1872.
2. The selection of the formulæ, and the details of execution, are left to the international penitentiary commission, with the reservation that all figures should be preceded or accompanied with the explanations necessary for their correct understanding.
3. The preparation of the annual international statistical record shall be confided to each of the nations represented in succession.

The formulæ of 1872 are contained in Signor Beltrani-Scalia's report, published in Rome in 1875, and referred to at pp. 316 and 317 of the volume of our *Journal* for 1876. The sub-committee was, I think, judicious in recommending the minimum that is at present procurable, for the prison reports of different countries. It will be easy to add to or modify it as time goes on, and the authorities of each nation become familiar with what is done by their neighbours. In dealing with crime and criminals, every country must be governed by its own laws, manners, customs, and state of civilisation; and it would be as idle, as it is manifestly unjust, to tax any nation with want of culture and humanity for its adoption or retention of any particular form of punishment or prevention, merely because it offends the public sentiment of another nation, which, in all the real elements of civilisation and advancement, may not be on a level with that which it condemns. For example, the punishments of death and flogging have been abolished in some countries upon grounds which doubtless appeared to them to be sufficient in the interests of humanity and of the diminution of crime; and other nations have no right to question the prudence or propriety of their action. It must be judged by its results. For the same reasons *they* have equally little right to taunt others with the retention of those punishments as a reproach to their civilisation, as was done at Stockholm. The calm and dispassionate collection of the facts represented by figures, and the careful consideration of these facts in some international form which gives a fair and equitable basis of comparison, is the best means of arriving at a correct conclusion in matters from which all mere sentiment should

be rigorously banished, and the inexorable logic of the numerical method honestly applied and rightly directed, alone be permitted to guide us in the study and correction of great social evils.

Now that the whole prison administration of Great Britain and Ireland has been placed under State control, it is to be hoped that the statistics of our convict and other prisons will be collected on some uniform basis, which, without taxing the prison authorities with unnecessary work, will present in a simple and intelligible form all the facts and figures necessary to judge of their efficacy and good government, and to compare their action, so far as it is at present comparable, with that of other nations in dealing with the crimes of their several populations.

It is sometimes objected to our continental friends that they seek a number of unimportant particulars. This may be so if the practical use of such particulars were confined to the mere question of prison discipline; but, they have a much wider legislative significance, and there is scarcely any fact connected with the history, antecedents, social status, and surroundings of the criminal classes that may not be of use in devising the means of dealing with crime, both with reference to its remedy and removal.

There were two little matters connected with the Stockholm Congress, which appear to me to be deserving of record for future guidance and imitation in our own statistical congresses.

The number of questions submitted for discussion was strictly limited; they were all prepared and circulated beforehand by the permanent commission of the penitentiary body; no change was made in them at Stockholm by the organising committee, a strictly local body; the essays on which the questionnaire was based were all in the official language of the congress, and were printed in a small 8vo. volume of reasonable compass.

In a paper drawn up by Signor Beltrani Scalia was contained the following words, which I venture to recommend to the careful consideration of the permanent commission of the Statistical Congress:—

“In order to secure the success of the congress, and to avoid as much as possible speculative discussions, it was determined to admit only a restricted number of practical questions into the programme, and to confide the preparation of one or two succinct reports upon them, to qualified persons selected for the purpose.”

The questions were determined at a meeting of the international commission, which corresponds to our permanent commission, held at Bruchsal in 1874, and the reporters were then selected, so as to give them ample time to prepare the material for the future congress.

This is a very near approach to my own suggestion on the subject,

and the eminent success of the Stockholm Congress is a complete proof of the wisdom of the procedure.

The next point deserving of attention is the mode of reporting adopted at Stockholm. In many countries there is considerable difficulty in finding reporters able to reproduce the discussions in the various languages spoken and allowed. Accordingly, in the rules adopted for the regulation of proceedings of the congress, was one to the following effect:—

Article 26. “To insure the accuracy and facilitate the prompt publication of the transactions, the speakers are requested to transmit to the bureau, with as little delay as possible, the substance of their speeches to aid in preparing for the press the materials intended for publication.”

“N.B.—The speaker can report his speech in his mother tongue.”

This rule was printed on separate sheets of paper in four languages, French, English, German, and Swedish, and one of the papers was placed in the hands of each speaker as soon as he had spoken, so that if he were not reported it was his own fault.

The advantages of this system are obvious. It saves the cost of short-hand writers, it secures promptitude and accuracy of record when the matter is fresh, and renders unnecessary the expense and delay of sending proofs of the stenographic notes to distant places for correction.

Should it be necessary to translate speeches into the official language of the congress for publication in the transactions, there is no difficulty and comparatively little expense in finding competent translators in every great city of Europe, whereas polyglot stenographers are as rare as they are costly.

While on this subject I may mention a wrinkle which I picked up at the International Medical Congress held in Geneva last year, which is likewise deserving of consideration. The official language of that canton is French, and the official language of the Congress was French, but as a large German contingent was expected, and German is likewise widely spoken in many parts of Switzerland, the essays and questionnaire were printed in double columns in French and German, and this was found of the greatest use in the subsequent discussion of the questions. At this congress also brevity and strict limitation of the questions were practised with success, which shows them to be deserving of universal adoption.

Conclusion.

Having thus briefly, in reality, yet perhaps in too great detail, attempted to present to the Society an abstract of the proceeding

of the different bodies which I was deputed to attend on its behalf, I venture to express a hope in conclusion, that the meeting of the permanent commission of the Statistical Congress for 1880 may, on the invitation of this Society, be held in London. That of next year will take place in the capital of Italy, a country which is now making rapid advances in statistical research, and probably doing a larger amount of well digested statistical work, than any other European nation. The time of England has come to take her share in this international work, and she is herself at present in a transition state as regards the organisation of a central statistical department, and the careful digestion of the numerous and important statistical returns, which she is collecting from every quarter of the extensive empire ruled over by our Gracious Sovereign. The number of delegates to be entertained is not very numerous, the questions to be considered are of the greatest interest and importance, and I doubt not that our Honorary President, whose valuable and genial support contributed so much to the success of the Paris Exhibition, will, when applied to, aid us in welcoming, as his illustrious father did in 1861, the representatives of the science we cultivate, from all parts of the globe. The noble words in which Prince Albert concluded his eminently philosophic address to the Congress of 1860 have not been without fruit in the time which has since elapsed, and it would be deeply interesting then, to take stock of what has since been accomplished in this field of scientific research in all branches of statistical inquiry by our countrymen in all parts of the empire. "Happy and proud indeed should I feel," said the Prince Consort, "if this noble gathering should be enabled to lay the solid foundations of an edifice, necessarily slow of construction, and requiring for generations to come laborious and persevering exertions, intended as it is for the promotion of human happiness by leading to the discovery of those eternal laws upon which that universal happiness is dependent."

DISCUSSION *on* DR. MOUAT'S PAPER.

THE CHAIRMAN, Mr. R. B. MARTIN, M.A. (Treasurer), said they must all thank Dr. Mouat for his report, in which a most valuable and suggestive series of questions had been brought together. He thought the first thing that must strike them in the paper was the headings and the occurrence in them of the word "international." He regarded this with the greatest possible satisfaction. He thought that the spread of international congresses, whether as regards the important subject of statistics, or any of the minor details which grouped themselves under the numerous heads that Dr. Mouat had shown, brought together the nations of Europe, and rendered them not only more friendly to each other, but enabled them to solve the most difficult problems in the statesmanship of our every-day life. The question of the interference of our Government and the extension by our Government of its protection, and the growing authority governments had over these congresses, was a very wide one. He should prefer to see them taken up by the nations themselves, and taken up only by the Government when the feeling was so unanimous that they should not be allowed to dwindle into meetings in which a few people only took an interest. At the same time one was sorry that any information obtained from foreign countries should not be assisted as much as possible by those who had the only available means of getting great statistical figures together. He thought that Resolution 8 of the International Congress, as to the publication of statistics relating to pauperism and mendicity would be peculiarly valuable to this country. He thought the suggestions and comments Dr. Mouat had put forward on the different schemes were extremely valuable, and showed the amount of care he had devoted to the subject. There were many important and most difficult subjects, on many of which the Statistical Society could produce most excellent results, such as accidents and insurances. These could not be taken at haphazard: they really all depended on statistics, and everything else must be mere guess-work. The Prison Congress, he thought, was a very valuable department, and of which he hoped they would constantly from year to year see the results. It always occurred to him that one of the most heartrending problems of the day was how to deal with that vast mass of the population who were a burden and a curse to their country; and any scheme that would raise them from degradation and relieve the ratepayers from maintaining them would probably only be arrived at by comparing notes with other countries, and then by working out what was already known on the subject of punishment, deducing the facts by which they ought to be governed.

Professor LEONE LEVI said he was sure the Society would be very glad to hear that the next meeting of the permanent commission of the Statistical Congress would be held at Rome. The

recollection of the Statistical Congress at Florence gave him un-mixed pleasure, for not only was it pleasant to visit that city—the seat of the arts—but the Government of Italy had shown much zeal in the collection of statistical documents for the benefit of the congress and much hospitality to the members. He was quite satisfied that a visit to Rome at this time would be still more interesting and valuable, inasmuch as Rome, now the seat of the Italian Government, was a prized centre of art and archæology, from which the members of the commission would derive both pleasure and instruction. The subject matter before them was the preparation of the statistical annual. He confessed to a feeling of disappointment at the results of the statistical commission. It was now many years since M. Quetelet had suggested that the materials published by the statistical organisation of different countries should be utilised for the production of volumes on different branches of statistical science from an international aspect. Very few of these, however, had been achieved. They had not as yet derived the benefit from the congresses that might have been expected, in consequence of the want of such studies as had been promised by the organisation of the permanent commission. When the International Statistical Congress was commenced, statistical observations were narrowed over the limited area of the different countries, but the area had now been extended to many millions of people; and if there were students ready to deduce the facts and the lessons, incalculable benefits would be realised. As yet no practical results of this important nature was before them; no great embodiment of facts connected with the human race had been attempted. We hoped the last suggestions of the statistical commission would bear some fruit. Statistical annuals were also required. The British Statistical Abstract was very valuable as a collection of reliable facts; but it was collected without any regard to any natural order and sequel. They should remember that the abstract as now published was the bones without the flesh. There was not even any indication of the authorities from which the facts were collated. He hoped that the abstracts published for general convenience may be rendered more practically useful than they had hitherto been.

Mr. PURDY, after expressing his astonishment at some of the statements made by Professor Levi as to the blue books, said that on reading Dr. Mouat's paper the first thing that struck him—that which lay at the bottom of this idea of “international” statistics—was that in the minds of the promoters of this movement, Governments existed for the purpose of collecting statistics. They, in fact, existed for the purposes of administration; for that administration they required a knowledge of facts, such as the amount and value of imports and exports, the number of the people, of the criminal and pauper population, and of a vast number of other things. In regard to paupers, there were two classes of them in England, the in-door and the out-door. The in-door pauper was wholly supported from the rates; the out-door pauper was simply assisted from the rates; his doles were quite insufficient for his entire support. Then if the head of a family receives out-door

relief, that pauperises him, his wife and children; if a child has medical relief only, that pauperises the child and the head of the family. Persons receiving medical relief only are thereby paupers in England, but not in Ireland. In England a man may have his child vaccinated, or the child's school fees paid at the expense of the poor's rate, and yet not incur the taint of pauperism. Now, were it possible to render the form of pauper statistics uniform throughout civilised States, how could the information be co-ordinated? What would be the use of international coincidence of form without coincidence in the tabulated subjects? The English pauper is probably an unique product. To co-ordinate the criminal returns of one State with those of another would be no less difficult a task when the details come to be handled.

MR. WALFORD said he agreed with a great many of Dr. Mouat's observations and conclusions, but thought his classification too condensed. For instance, he did not furnish a head for Physical Occurrences, which were quite as important in their bearings upon the well-being of the human race as any of those enumerated. He had himself attended several of the international statistical congresses, but he left off going mainly for this reason—that they attempted to do, not too much, but to do impossible things, such as making one general arrangement for the statistics of all the countries of Europe. This was simply impossible, for as Mr. Purdy had very truly pointed out, pauperism in France was altogether different from pauperism in the United Kingdom, it did not therefore fall into the same place in a scientific classification. After some reflection, he (Mr. Walford) had come to the conclusion that a simple alphabetical enumeration of the heads of inquiry, or of titles of returns, would be most effective for general use. Then each person using the returns, would know where to look for what he wanted, and he could mould his conclusions into any shape he pleased, scientific or otherwise.

MR. GIFFEN thought the Society were very much indebted to Dr. Mouat for the account he had given to-night of the various Congresses or Conferences at which he had represented the Society. It was instructive to hear what foreign statisticians and savants were concerned about in those branches of knowledge with which the Society was more specially connected, and Dr. Mouat's account of what was said and done seemed all that could be wished. Some of the gatherings of which they thus obtained a report were very interesting, and having been present himself, he could vouch at least for the number and variety of interesting statistical questions debated at the meeting of the Commission of the International Congress at Paris. Dr. Mouat had referred to several of the subjects, but he might have noticed in addition a paper by M. Poznanski of St. Petersburg, on the expediency of getting statistics of bourse speculation; another by M. Neumann Spallart on the deficiencies in the statistics of the production and movement of the precious metals; a third by M. Tisserand, of the French Ministry of Agriculture, on Agricultural Statistics; besides many

others. He hoped from what Dr. Mouat had said, that more than one member of the Society would be induced to consult the *compte rendu* of the commission which was in the library. He might take the opportunity of adding that not only was the Society much indebted to Dr. Mouat for the report he had read, but they were indebted to him for previous reports of the same character, and not only that, but also for the way in which Dr. Mouat had performed his duties at the congresses and commissions as a representative of the Society. Having been present at two of the meetings with Dr. Mouat, he was able to testify to the excellent manner in which Dr. Mouat represented them, the position he was able to take, and the influence he had on the discussions being such as to be in every way satisfactory to them. The reports which Dr. Mouat had read, therefore, were an indication of a very great service he had rendered to the Society, and they must join with him in the hope that he would be able to represent them for many years to come. He did not feel at liberty to enter on the main object of discussion in Dr. Mouat's paper, owing to his official position, which would necessitate his giving an opinion elsewhere, but with regard to some of the points mentioned by various speakers, he had one or two remarks to make. He was disposed to agree with Mr. Purdy, with reference to the proposed International *Annuaire* of Statistics and other annuaires got up on the model suggested by the International Congress. It was easy to exaggerate the value of form in these matters. In a statistical display of a country a certain logical order was necessary, but the purpose of an *annuaire* was different. It was to be used as a work of reference, and as such, an order that was not a very logical one, perhaps an alphabetical one, might be found more convenient than one of these formal arrangements which the International Congress had originated. Another objection to introducing such annuaires in this country would be, that they had already got one or two well known Statistical Abstracts in a form which had been found most convenient after long trial, and which it might be inexpedient to alter much, for the simple reason that people who were used to it would be put to inconvenience. Another passing remark which had been made was a rather disparaging one in reference to Russian statistics. It happened, however, that Russia did not suffer from want of statistics. Russian statisticians, he believed, considered themselves second to none in any other country. Certainly whatever doubts there might be as to the trustworthiness of the data in some cases, there was no lack of statistics in Russia, and no lack of first rate statisticians able to handle statistics.

Dr. MOUAT replied briefly to the effect that the first condition of international statistics is the collection and grouping of the figures in some definite order, after which would naturally come the explanations regarding the exact significance of the figures themselves in their international interpretation. The latter would of necessity be a question of time, and of much careful consideration: the former could be adopted at once; hence the need of

some fixed arrangement instead of the hap-hazard and indefinite plans now in use.

As respects the action of governments, Dr. Mouat would limit it to a mere official recognition of the congress or its executive, the permanent commission, leaving the whole of the detailed arrangements and management of the meetings to the members of those bodies unfettered. The official recognition would give it a *locus standi*, and the degree of consideration to which it is fairly entitled. More would neither be advisable or necessary.

Dr. Mouat hoped that some action would be taken by the Society in the matter before the meeting of the permanent commission in Rome, in October next.

On the FALL of PRICES of COMMODITIES in RECENT YEARS.

By ROBERT GIFFEN, ESQ.

[Read before the Statistical Society, 21st January, 1879.]

THERE is a general agreement that during the last few years there has been a heavy fall in prices. The fall in cotton and iron, and the various manufactures of cotton and iron, is notorious, and for the rest the losses in trade, in almost every description of business, have been such as to leave no doubt of a fall in price. It is usually a fall in price which cripples the weaker borrowers, and causes bad debts, and this makes a beginning of losses by which stronger borrowers are in turn crippled, farther falls in prices ensue, and more bad debts and losses are produced. When we see so many failures as are now declared, therefore, we may be quite sure that they are preceded and accompanied by a heavy fall in prices. But the question for statisticians in such a matter is not the fact of a general fall, but whether it can be measured and compared with other facts of a similar kind, and whether there is anything to show the fall to be of a more or less permanent character, and not merely a temporary fluctuation which will be corrected by an immediate rebound; in other words, whether the average of two or three years, including the present, will or will not exhibit a decline when a comparison is made with a date two or three years back. Looking at the matter in this more definite way, I have come to the conclusion that not only is there a decline of prices at the present time from the high level established a few years ago, but that this decline is more serious than the downward fluctuation of prices usually exhibited in dull times, and that it may be partly of a permanent character unless some great change in the conditions of business should occur at an early date. I think this can be shown without difficulty with the help of some well known figures which have been published lately, and which I propose to analyse and sum up, after which I shall proceed to discuss the causes of this apparently serious decline in prices, and some of the probable consequences.

I.—The Extent of the Fall.

To take the matters in the rough first: we may see what the general fall of prices has been by which the popular impression has been created. For this purpose I have made use of tables of

prices of certain leading wholesale commodities which I prepared for a series of articles commencing in 1874 and continued for several years. From these tables I have extracted the prices on the 1st of January in each year, carrying them back for the sake of comparison to the 1st of January, 1873, which was the period, as we shall see, of maximum inflation during the late prosperous period, and bringing them down to the 1st of January of the present year. The result is seen in the first table of the appendix to this paper, which certainly gives the impression of a tremendous fall, continued as regards almost every article from the time the table begins. Thus Scotch pig iron, which is the first on the list, falls from 127*s.* to 107*s.* 6*d.* the following year, and then to 80*s.*, 64*s.* 3*d.*, 57*s.* 6*d.*, 51*s.* 6*d.* and 43*s.*, the fall in the end amounting to no less than 66 per cent. of the original price. In Straits tin the fall is from 142*l.* per ton in January, 1873 to 120*l.* the following January, and then to 94*l.*, 82*l.*, 75*l.* 10*s.*, 66*l.*, and 61*l.*, the fall in the end amounting to 57 per cent. of the original price. To pass from the metals to the raw materials of the textile manufactures, we find the fall in cotton to be from 10*d.* per pound in January, 1873, to 8 $\frac{1}{8}$ *d.* in the following January, and then to 7 $\frac{1}{4}$ *d.*, 7*d.*, 6 $\frac{1}{8}$ *d.*, 6 $\frac{1}{2}$ *d.*, and 5 $\frac{3}{8}$ *d.*, the fall in the end amounting to 46 per cent. of the original price. In wool the fall is from 23*l.* per pack in January, 1873, to 19*l.* 15*s.* in January, 1874, and then to 18*l.* 5*s.*, 17*l.* 10*s.*, 16*l.* 10*s.*, 15*l.* 10*s.* and 13*l.*, the fall in the end amounting to 43 per cent. of the original price. The fall is not quite continuous in all cases. In wheat, for instance, although the fall in the end is from 55*s.* 11*d.* to 39*s.* 7*d.* per quarter, or equal to 29 per cent. of the original price, we find the price in January, 1874, to have been higher than in January, 1873, while in 1877 and 1878 the price was nearly as high as in 1873. But in a good many instances at least there is a continuous and steady decline, and in some instances of intermediate reaction, as in the case of sugar, the recovery appears to have been for a short period only. As regards sugar itself, the price of 22*s.* in January, 1877, stands out isolated among the years of low price on either side. Altogether there are sufficient instances of a continuous decline, and of other instances where the intermediate recovery was very brief, to justify us in speaking of the whole table as showing not only a heavy, but for the most part a continuous, fall in the prices of commodities which commenced in January, 1874, and has lasted to the present time. Of course this must be on the assumption applicable to all such tables, that the articles are really representative of the wholesale markets. Short as the table is, however, I believe the articles are fairly selected, and they have at least this advantage, that they were selected in the beginning of 1874, with a view to recording current

prices in a convenient and easily handled form, and have not been put together *ex post facto* for the purposes of the present paper.

To show how heavy the fall is, comparing simply January, 1873, with January, 1879, I have made up the following table :

Prices of Leading Wholesale Commodities in January, 1873 and 1879 compared.

	January, 1873.	January. 1879.	Fall in 1879.	
			Amount.	Proportion per Cent. on Price of 1873.
Scotch pig iron per ton	127s.	43s.	84s.	66 ✓
Coals "	30s.	19s.	11s.	37
Copper, Chili bars "	91l.	57l.	34l.	37
Straits tin "	142l.	61l.	81l.	57
Wheat, Gazette average per qr.	55s. 11d.	39s. 7d.	16s. 4d.	29
" Red spring, at } per bshl.	\$1.70	\$1.10	\$0.60*	35
" New York }				
Flour, town made per sack	47s. 6d.	37s.	10s. 6d.	22
" New York price per brl.	\$7.5	\$3.70	\$3.80*	51
Beef, inferior per 8lbs.	3s. 10d.	2s. 10d.	1s.	26
" prime, small "	5s. 3d.	4s. 9d.	6d.	10
Cotton, mid. upland per lb.	10d.	5½d.	4½d.	46
Wool per pack	23l.	13l.	10l.	43
Sugar, Manilla Musca per cwt.	21s. 6d.	16s.	5s. 6d.	26
Coffee, Ceylon, good ord. "	80s.	65s.	15s.	19
Pepper, black, Malabar..... per lb.	7d.	4¼d.	2¼d.	39
Saltpetre, foreign per cwt.	29s.	19s.	10s.	34

A table like this speaks for itself, and fully justifies the popular impression of a great and general decline in the prices of commodities. I think it even strengthens the impression. We should hardly have suspected beforehand that prices of wholesale articles not selected with a view to make out a case, but impartially chosen years ago as representative of the markets, would exhibit a fall in the last six years, ranging from 66 per cent. in the most extreme, to 10 per cent. in the least extreme case, and ranging, with three exceptions only, between 26 and 66 per cent. So great a change would seem to make it probable both that unusual causes have been at work, and that unusual effects have been produced.

We come then to the question which we stated at the outset, viz., whether the *primâ facie* impression is correct, and the fall is anything more than what has happened before in the change from a period of inflation to a period of depression. To help in a solution of this question, I have availed myself of a table which was drawn up and is continued annually in a well known "Commercial

* The fall in the latter of these two cases appears to have been affected by the appreciation of the paper money in the United States.

History and Review," by a distinguished Member of this Society, whom it is not necessary for me to name. In this table (see Appendix Table II) a certain value, 100, is assigned to each group of a considerable number of articles in respect of the average prices of these articles in the years 1845-50, the value of all of these together forming the index number 2,200. The proportionate results in each year or period of years since the above date are then deduced, the sum of 100 being added to when the price has risen and subtracted from when the price has fallen, and the results for each year being added giving a new index number. The net result now is the following series of index numbers, the one for January of the present year being my own addition, and being subject of course to the correction of the author of the table when he continues his work.

Date.	Index Number.
1845-50 Average six years	2,200
'57 1st July	2,996
'58 1st January	2,612
'65 "	3,575
'66 "	3,564
'67 "	3,024
'68 "	2,682
'69 "	2,666
'70 "	2,689
'71 "	2,590
'72 "	2,835
'73 "	2,947
'74 "	2,891
'75 "	2,778
'76 "	2,711
'77 "	2,715
'78 "	2,554
'79 "	2,227

According to this, comparing January, 1873, with the present time, we have a change in the index numbers from 2,947 to 2,227, which is equal to a fall of 24 per cent. on the average. It appears however, that between 1865 and 1871 there was a still greater fall, the change in the index number between these dates being from 3,575 to 2,590, or equal to 27 per cent. Great as the fall in recent years has been, therefore, it would appear that on striking an average it is more than paralleled by what happened in the immediately preceding period of depression. The explanation, I believe, is that in 1865 the index number was excessively raised by an exceptional circumstance, the great rise in cotton and cotton goods owing to the American War, but apart from this exceptional circumstance throwing out the comparison of the former period, the recent decline is greater than that which followed 1865. Without

any such exceptional occurrence to raise prices at first, there is finally on the average, according to this table, a decline of 24 per cent. I may add, perhaps, though I should be most unwilling to criticise the construction of the table, that it seems to me to give an excessive weight to cotton and wool, and too little to the metals, while coal is altogether omitted. The result is that changes in the price of textile articles affect the table much more than they would affect a similar table into which the metals entered more largely. On the other hand, considering how textile articles enter into general consumption, the table may be more perfectly representative of general prices than if the index number were differently composed.

But while this table does not show that the recent decline of prices is without a parallel, it indicates another fact of no small importance for the present inquiry. This is, that the closing index number approaches most nearly of all to that of the average of 1845-50. That average is 2,200, but in all the years named, including 1857 and 1858, and every year from 1865 inclusive, the lowest index number is higher than that for January, 1879. The lowest of the previous depressions following 1865 was 2,590, but the figure now touched is 2,227 only. Even therefore if the fall from the highest point of the previous inflation is now less than it was after 1865, we have still to consider that the inflation from which there is now a fall was not aggravated as that of 1865 was by a cotton famine, and that the descent is now to the lowest level of prices which appears to have been touched since 1850. In other words, we seem to have been getting back in our years of depression to the average prices of the period just before the Australian and Californian gold discoveries began to tell on the markets of the world. This does not mean of course that prices are getting back to that average; we seem yet to be a certain way from that point; only that in our years of depression we touch a point much more nearly approaching that average than we did in the years 1868 and 1869.

Passing from these figures I come to certain tables which were prepared last summer by my friend Mr. Arthur Ellis, one of the young Members of this Society, and who has already been a credit to us. As a supplement to the "Statist" of 9th June last, he published a long essay on the "Money Value of Food and Raw Materials," in which he compared the prices of 1859, 1869, 1873, 1876, and the first quarter of 1878, using for that purpose a new species of index number, based upon the relative amounts of articles imported, with certain additions for articles produced at home. The principal results of this procedure are exhibited in two tables, which are reprinted in the Appendix (*see* Appendix III), and of

which we have the net effect in the following short table in the body of the article :—

	Index Number.	Relative Cost in				
		1859.	1869. Standard.	1873.	1876.	1878, First Quarter.
Foods	53	49·780	53·000	60·230	56·010	60·550
Materials.....	47	41·790	47·000	54·830	40·600	37·925
Aggregate, as above	100	91·570	100·000	115·060	96·610	98·475

In other words, taking 1869 as the standard, we find that in 1873 the average prices of food and raw materials according to this mode of computation had risen about 15 per cent., but in 1876 they had fallen rather more than 3 per cent. compared with 1869, and in the beginning of 1878 were $1\frac{1}{2}$ per cent. below the 1869 level. Considering the great fall of prices which has occurred since these tables were prepared, they may be considered to confirm fully what has been deduced from the above figures, that there has been a fall to a lower level during the present depression than what was established after the inflation of 1865. Even at the beginning of last year prices were lower than they had been in 1869, and there has been a great and general fall of prices since the beginning of last year.

A noteworthy point in this table is the circumstance that the fall is almost exclusively in raw materials. Since the table was prepared, however, there has been a great fall in articles of food, which are now at a low level of price like other things.

I have yet another set of figures, which you will perhaps allow me to refer to before I leave this question of the extent of the fall of prices in recent years. In a report which I have lately prepared for the Board of Trade, on the prices of our exports, copies of which are just being circulated, I have first of all shown in detail the prices of the various articles of our export trade, as deduced from the declared quantities and values in each year from 1861 to 1877, and I have then endeavoured to show the average rise or fall of price, taking 1861 as the basis, by the above method of an index number, using the actual proportions of the value of the exports of each article to the whole value exported in calculating the average rise or fall of price. The result, I find, is that in the undermentioned years, assuming 73·1 as the index number, that being the proportion of the value of the enumerated articles of export to the whole export values, the following additions or deduc-

tions would fall to be made according to the average changes of prices as compared with 1861 :—

1865	+ 22'71
'73	+ 20'60
'68	+ 9'99
'75	+ 8'26
'76	+ 1'17
'77	— 2'04

Here again, without allowing for the great fall of prices in 1878, we find an indication that prices are now at a much lower level than they were after the depression of 1865. In 1868 the index number is still 9'99 above the level of 1861, but in 1877 it is already 2'04 below that level, while in 1878 there has been a fall below 1877. Curiously enough also it would again appear that in 1865 prices rose to a higher level in a time of inflation than they have since touched. The fall now is from a lower height than the fall after 1865, though a much lower depth has been reached. Of course this table only deals with exports, but in that respect it is supplementary and confirmatory of the above tables of Mr. Ellis's as to food and raw materials, which are mainly based upon the imports.

The general effect of all these figures may now be summed up. *First*, it has been shown by a general table of prices at the beginning of each year, from 1873 to 1879 inclusive, that there has been a general and remarkable fall in the prices of wholesale commodities in the period, this fall having also been to a large extent continuous, and amounting in the end, with three exceptions only, to between 26 and 66 per cent. *Second*, it would appear from a comparison of prices by means of the index number in the "Commercial History and Review," that the average fall between 1873 and 1879 is 24 per cent. and that the level of price now established is lower than anything recorded since 1850 in the tables referred to, these tables comprising the years 1857 and 1858, and each year since 1865 inclusive; further, that although the fall between 1865 and 1871 appears greater by this index number than between 1873 and the present time, yet there is a special explanation of this, and there is reason to believe the present fall to be unusually great. *Third*, it has been shown by certain tables of Mr. Ellis's that as regard food and raw materials, prices at the beginning of 1878 were lower than in 1869, one of the years of depression following 1865, while prices are now considerably lower than at the beginning of 1878. *Fourth*, it has been shown as regards the prices of exports, that the average in 1877 was considerably lower than in 1868, while the fall to the present level was from a lower height in 1873 than the previous fall in 1868-70

from the height of 1865. Allowing for the further fall of prices in 1878, we are confirmed in the belief that prices are now unusually low, and that the facts shown by the first index number cited rather understate than overstate the change. In other words it is ascertained by the concurrent testimony of all the facts examined, that prices of commodities are unusually low, though one of the sets of the figures would seem to throw doubt on the idea that the fall from the height of an inflated period to the present depth is unusually great. The preponderance of evidence seems, however, to be that there is an unusual fall, although it began from a lower level than what had been established in the previous inflated period. I have not attempted, however, to measure exactly what the extra depreciation is, though I should be inclined to put it at between 10 and 20 per cent. below the prices of 1868-71. In these matters great exactness is impossible; without waiting to aim at great exactness, I have thought it would be useful to bring the rough facts together, pending the more elaborate efforts which I trust some of our Members—perhaps Mr. Jevons—may be induced to attempt.

II.—*The Causes of the Fall.*

To a certain extent there is no doubt or mystery about the causes of so general a fall of price. They are the same as the often recognised causes of similar downward movements. When trade is good a state of things is created in which a downward movement of prices is sooner or later inevitable. A great stimulus has been given to production in certain favourite industries; capital has been employed in creating new establishments, or in extending fixed works and plant; labourers have flocked into the trade attracted by the high wages; at a point the demand is found to be below the supply, the prices of the manufactured article become unremunerative, and in time the raw material and labour employed in the trade are at a discount. The fall is precipitated moreover by the inability of speculative holders of stocks to hold on in face of falling markets. At each new stage of the decline new sales become necessary, till there is apparently no limit to the fall, just as before there seemed no limit to the rise. By sympathy almost all markets come to be affected, the low prices in one market attracting capital to it, and so weakening other markets, while speculators who are hit in one department of trade seek to cover their losses by sales of some commodity or stock which has not depreciated. This is the ordinary explanation of a general fall in prices; and the only feature in the late decline it would not explain would be the long continuation of that decline, and its renewal from time to time when many circumstances appeared to combine in favour of a new

upward movement. This feature is however quite consistent with the usual course of a general fall of prices, though it has seldom perhaps been so prominently brought out as during the recent fall. In almost all markets there is constant action and reaction as well as the more general tidal movement which attracts attention when the course of prices for several years is looked at. It depends upon minor circumstances, we might almost say accidents, whether a given reaction will amount to a turn of the tide or not. If these minor circumstances are unfavourable for a time, the definite turn of prices upwards may be retarded, although the circumstances may be of a kind that when trade is stronger they would have little apparent effect. In this way it is quite possible for instance that the wars and rumours of wars during the last three years may have retarded the recovery in prices which is sure to come sooner or later, although trade is often brisk in time of war and amidst great political disquiet, as was the case for instance in 1870-71 during the Franco-German war. The great prolongation of the late decline, therefore, is not inconsistent with what we may expect at times when there is a general fall of prices.

We have something more to account for, however, than a general fall of prices, viz., the lower level which has been reached as compared with the last period of depression. This may be accounted for in part by the circumstance that the rise from which the present decline has taken place was not to so great a height as the rise which preceded the former decline; although a lower level has now been touched, the recent movement may be no greater; but even if we had not this explanation, or if it did not account for the entire descent which has taken place, there are not wanting special circumstances which go far to account for this great descent, as well as to account, if necessary, for that prolongation of the decline which has been referred to. Among these circumstances I would notice *first* the extremity of the discredit in recent years, and the piecemeal way in which the failures and disclosures causing the discredit have occurred. It is difficult in such matters to compare one time with another, and probably in every time of depression there is a feeling that things were never so bad before. I recollect perfectly well after the 1866 panic the languid and despairing feeling which pervaded the city for two or three years, when there was a prolonged reign of 2 per cent., and for a time discount houses were barely paying 10s. per cent. for deposits. A famous article was written at that time in the "Edinburgh Review" on the strike of capital, and people blamed Lord Clarendon for having made matters worse than they were ever known to be before by the explanatory circular he sent to our representatives abroad with reference to the

1866 panic. The Overend failure had also been unprecedented, and so people were satisfied that the depression was the worst. But in spite of the gloominess of affairs after 1866, it must be admitted, I think, that what came to light then was not so calculated to cause discredit as the revelations of the last three or four years. To that period belonged the Overend failure, the disclosures attending the break up of a company mania of a not very extreme type, and some temporary difficulties of our great railway companies, whose debentures could not for a time be floated. Within the last four years, on the other hand, we have twice had commercial revelations of the most discreditable kind, viz., in 1875, when Messrs. Im Thurn, and Co., Collie and Co., Sanderson and Co., and the Aberdare Iron Company all failed, besides many more, and next in the present year, when we have had such firms as Messrs. Smith, Fleming and Co., Messrs. Heugh, Balfour, and Co., and Messrs. James Morton and Co. all collapsing. Next, there has been perhaps the greatest financial collapse ever known, viz., that of foreign loans, which has not, so far as known, inflicted incurable wounds in the banking world as the commercial revelations have done, but which has dried up the channels of investment, and reproduced the strike of capital so strikingly written about ten years ago. Last of all, we have had banking disasters quite on the scale of 1866, including, perhaps, the most alarming, I might almost say bewildering catastrophe ever known in banking annals, that of the City of Glasgow Bank. The spectacle of such colossal fraud and of the danger run by investors in unlimited banks, seems calculated to create more distrust, and has, I believe, created more distrust, than the disaster of Overend's failure, great as that catastrophe was. Happily there has not been a panic during the last four or five years, although the city has more than once been on the verge of one; but, with this exception, the circumstances likely to cause discredit have altogether been stronger in the last few years than they were in and after 1866. Allowing then for the illusion which present evils are apt to create, there appears to me something in the extreme discredit of recent years to account for the fall of prices to a lower level than after 1866, although the real distress in trade may be no greater. The same result would have followed from the long continuance of discredit. If the disclosures which have been spread over three years had come all at once, say in 1875, perhaps we should have had in that year a greater panic than that of 1866, and the distress which is now being felt would have followed sooner, but the reaction might have come quicker through the more effectual clearing of the air. It is at any rate all but certain that in 1875 itself there was a reaction upwards, which was greatly checked by the revelations of that

year, although another cause co-operated, viz., a succession of bad harvests, which I shall presently mention; and again, last year there was a general feeling that improvement had set in, when the disturbance in the money market in the autumn, culminating in the Glasgow Bank failure, at once threw matters back. The gradual character of the failures and revelations has thus had something to do with the greatness of the fall in prices. When just sufficient time has been given for speculators to take heart, suddenly some new evil breaks out, and prices tumble, as if from an inflated level, from the lower level at which they had been fixed in the first effort at improvement.

The *second* cause I would notice as probably contributing to the severity of the fall is the bad harvests of the three years 1875, 1876, and 1877. It has long been an axiom of economists that nothing so powerfully conduces to depression in trade, and a consequent fall in prices, as a succession of bad harvests. One bad harvest among several good ones may not have much visible influence, but a succession of them is recognised as a potent cause of mischief. The usual explanation has been that the bad harvest, leading to a high price of bread, causes direct distress among the masses of consumers, that their purchases of staple manufactures fall off, that the people in the trades so affected also become poor, and so by a quick round all trades become impoverished. If a second bad harvest follows the first, and a third the second, these evil effects are aggravated, and affairs at last come to be very bad. In addition, in a country like England, which has to import more largely from abroad when its own harvests are deficient, the bad harvests tend to make the exchanges adverse, raise the value of money, diminish new investments, and so injure trade. Whatever the *modus operandi*, the bad times following on bad harvests have been too notorious for the connection to be overlooked. Now perhaps we are only beginning to appreciate how bad the harvests were in this country for the three years before 1878. The fact that the great rise in the price of wheat and bread which was formerly considered the worst effect of a bad harvest, and the most powerful cause of the succeeding depression, has not been observed in recent years, helped to blind business men to the actual deficiency. But the deficiency was most serious. The wheat harvest to begin with was undoubtedly most deficient. According to Mr. Caird, taking the average yield of the last thirty years to be 100, the yield of 1875, 1876, and 1877, was respectively:—

1875	78
1876	76
1877	74

In other words, our wheat harvest was deficient by one-fourth as compared with the average, and much more of course as compared with a good year for three years running. The usual rise in wheat and bread has not followed, owing to the very fact that the home yield is now less important than the aggregate foreign importations, but other effects of a deficient harvest must have ensued. Nor was there any compensation, as there often is in England, in the yield of grass and root crops, but the reverse. Here we cannot measure the yield in the same way, but the diminution of the stock of cattle and sheep in the three years ending 1877 was most marked. In Great Britain the reduction in cattle was:—

	Stock of Cattle.	Reduction on previous year.
1874.....	6,125,000	—
'75.....	6,013,000	112,000
'76.....	5,844,000	169,000
'77.....	5,698,000	146,000

—making a total reduction of 427,000 in a stock of 6,125,000, or about 7 per cent., in three years. In sheep the reduction was:—

	Stock of Sheep.	Reduction on previous year.
1874.....	30,314,000	—
'75.....	29,167,000	1,147,000
'76.....	28,183,000	984,000
'77.....	28,161,000	22,000

—making a total reduction of 2,153,000 on a stock of 30,314,000, or 7 per cent., in three years, the reduction in this instance having been almost wholly in the first two years. Such a reduction clearly implies, I think, some difficulty in the farming and landowning industry owing to the diminished productiveness of the industry, although it may be in part explained by the gradual substitution of superior for inferior stock—the diminution in numbers being accompanied by an improvement in weight and quality—and in part by the substitution of permanent pasture for other crops, the permanent pasture giving a larger net but a smaller gross produce. These explanations do not cover the entire ground, and something is left which can be placed to no other account than the unproductiveness of the industry.

Now although these bad harvests have not produced the effect of raising the price of bread, which used formerly to cause so much distress and depression in trade and a fall in general prices, with

the exception of bread, business men and economists have both, perhaps, overlooked what the result must be of such a succession of mishaps to the greatest single industry in the country. Mr. Caird estimates the average annual value of our crops at 260 millions, and if the gross produce has fallen off 10 per cent. for three years running, the cumulative effect on our home industry may have been very great. Instead of being able to save largely, farmers and the rural population may only have been able to save a little, and many, perhaps, have had to live on their capital, changes which would tend to weaken our whole internal trade, and diminish the fund for new investments. In actual fact, I believe it has been a characteristic of the money market since the spring of 1876, at which date the effect of the bad harvest of 1875 would begin to be felt, that the banks connected with the agricultural districts have been poorer than they were. Some have been obliged from time to time to draw upon their spare money in London, and generally they have not been transmitting to London the usual large sums they have been able to send awaiting new investment. Another consequence of the bad harvests has undoubtedly been a less favourable foreign exchange, although it was only in 1878 that this unfavourable exchange culminated in anything like a serious stringency in the money market, and that stringency was much less than bad harvests had often led to in former times, owing mainly, I believe, to the plentifulness of floating capital throughout the world, which enabled us to attract with comparative ease what temporary money we required. Still there has been a stringency which would tend directly to check trade and lower prices a little, especially when trade was only barely convalescent, and which has indirectly checked trade a great deal by precipitating banking failures, and so causing much discredit.

It will be said perhaps that this unfavourable exchange was the result of the excess of imports and the wasting of our foreign capital, of which we have heard so much during the last few years. But so far as the excess of imports is due to a temporary deficiency of our harvest, I think it hardly proper language to describe the unfavourable exchange resulting as due to a waste of capital or to anything very mysterious, when it is the common and familiar, and also transitory effect, of a common, familiar, and also transitory cause. Everybody allows that bad harvests make bad times, but unless bad harvests are to continue indefinitely, of which we have had no experience, this cause of mischief will soon be absent; undoubtedly it has helped to bring about the present extreme depression of prices.

A *third* cause which must be mentioned is the extraordinary demand for gold for the new coinage of Germany, and for the

United States on its resumption of specie payments during the last few years. It is a little difficult to consider this point except in connection with the question of the supply of gold, and any variation in that supply which may have occurred, but what I desire to bring out is that apart from a permanent diminution of the supply, whether absolutely or in relation to the growing wants of the world, which would necessarily have a permanent effect on prices, extraordinary demands like those referred to would tend to produce a momentarily extreme fall. The reason is that a sudden pressure on the stock of the precious metals at a given period tends to disturb the money markets of the countries using them; makes money dear, or creates a steady apprehension that it may at any moment become dear; and so by weakening the speculation in commodities and making it really difficult for merchants and traders to hold the stocks they would otherwise hold, contracts business and assists a fall in prices. It is conceivable that after such a pressure the current supply of the metals may again be found sufficient to meet the current demands with prices raised to their former level; but while the pressure lasts prices are low.

Now the extraordinary demands of the last few years—I think I may say eight years, the German lock-up having commenced in 1871—have certainly been of a kind to produce some momentary effect, even on the assumption that the supply of gold, when the pressure is removed, remains sufficient for the wants of the world with prices at their former level. Altogether during the last six years Germany has coined 84 millions of gold, very little of this being re-coinage. The accumulation of gold in the United States, again, principally during the last two years, amounts to about 30 millions sterling, the stock of gold in the country above what it had for several years previous having been increased by that amount. These two sums amount to 114 millions, and if we allow for other extraordinary demands such as that for Holland, which has been substituting a gold for a silver money, and at the same time make deductions for what Germany may have recoined, we may say in round numbers that the extraordinary demands for gold during the last eight years have amounted to 120 millions; or 15 millions a-year. As the annual production of gold eight years ago was estimated at from 20 to 22 millions only, and has since rather fallen off, as we shall presently see, it is quite plain that these extraordinary demands can have left very little for the ordinary wants—the wear and tear of coinage, losses, use in fine arts, and new coinage to correspond with the wants of populations increasing in numbers and wealth. My own calculation in 1872, in a series of articles which I then wrote, was that for many years previous the average requirements of the gold-using countries,

excluding both Germany and the United States, which were not then in the list, had been 12 millions annually. But if you deduct 15 millions from 20 or 22 millions, you have much less than 12 millions left, and consequently the former state of things as regards prices could not have been maintained during these eight years. Now that the extraordinary demands are over, prices may recover, but the extraordinary demands must have contributed to the present adverse fluctuation.

These three causes then—the extreme and prolonged discredit, the bad harvests, and the extraordinary demands for gold—appear to me to have concurred in bringing prices of commodities to the lowest level which has been reached at any period for many years. That they would be sufficient to account for much of the effect which has been produced can hardly be disputed, and that they have existed is beyond all doubt.

The question is infallibly suggested, however, whether in addition there is not a subtler cause at work—an actual insufficiency of the current supply of gold for the current demands of gold-using countries. This is quite a separate question from the effect of the extraordinary demands which have been described, and it seems to me most important that we should keep it separate. It is a subject infinitely more complex and difficult to treat, and one on which even the most skilled, I believe, would venture to give an opinion with far more diffidence than on the effect of the extraordinary demands themselves.

My own opinion is that some such cause may have been at work, though whether its effects would have been at all marked as yet, in the absence of the extraordinary demands, may be doubted. The main presumptions to this effect are—*first*, the undoubted falling off of the gold supplies during the last twenty years. I have reprinted in the Appendix (Table IV) that portion of the table put in by Sir Hector Hay in his examination before the silver committee which relates to the production of gold, as containing, I believe the most generally accepted estimate of what the gold production has been. The following is a summary of that table in quinquennial periods, with the annual average for each period:—

Estimated Production of Gold in the Years 1852-73, in Quinquennial Periods, with the several Averages for each Period.

Period.	Total Production.	Annual Average.
	£	£
1852-56	149,665,000	29,933,000
'57-61	123,165,000	24,633,000
'62-66	113,800,000	22,760,000
'67-71	108,765,000	21,753,000
'71-75 (4 years)	76,800,000	19,200,000

The dwindling of the supply in this table is very marked, and naturally suggests that the effect on prices of the great gold discoveries may not have been continued much beyond 1861, while lately the difference is so great that, even apart from extraordinary demands for gold, that effect may have been reversed. The difference of an annual yield of from 25 to 30 millions between 1852 and 1861, and an annual yield of less than 20 millions at the present time is palpable. Of course the question is not settled by this consideration. One of the effects of the great gold discoveries was to create new markets for gold itself. Under its bi-metallic *régime* France replaced an enormous stock of silver by gold, and becoming a gold-using country, absorbed the new supplies to an enormous extent. India again absorbed an immense sum, especially during the years of the cotton famine, when her credit abroad was so suddenly and so enormously augmented. Until 1866 it may be said the market for gold was so affected by extraordinary demands that there was hardly time for prices to settle down into a normal state, and the full effect of the new supplies on gold-using countries alone was never fully tested. But it is at least obvious that the diminished supply could not now meet the extraordinary demands which were met by the supply of the earlier years, even if the ordinary demands have continued the same.

I should add that not only do the figures show an actual falling off of supply, but there is a probability of the supply being obtained at a greatly increased cost of production. The nineteen millions now produced are obtained with more effort than the thirty millions twenty years ago. This means that if prices were to tend upwards, a check might be put upon the movement by a still farther falling off of the gold supply. It might not pay to work mines which are now profitable if prices all round, necessarily including wages as well as commodities, were to rise.

We come then to the question whether ordinary demands have continued the same, to which the answer must, of course, be that coincident with the gradually declining supply of gold there must have been an enormous increase of current demands. The increase of population in the gold-using countries alone must have been nearly 50 per cent. In the United Kingdom alone, the annual rate of increase has been for long nearly 1 per cent. per annum, 0·83 per cent. between 1861 and 1871, which gives 28 per cent. in thirty years, while in the Australian colonies the rate of increase is, of course, much greater. Suppose the world's annual supply of gold before 1848 — say six millions sterling — was quite sufficient to maintain equilibrium then, which I doubt, the natural increment of population, assuming it to be no more wealthy and to use no more coin per head than the popula-

tion before 1848, would make the present usual requirement from the gold-using communities in existence before 1848 or their descendants, about 9 millions. But the wealth per head has increased enormously. In the paper I read last year on Recent Accumulations of Capital in the United Kingdom, the rate of increase in the ten years ending 1875 was estimated at 27 per cent., and this rate of increase being deduced from the actual rate of increase in the assessments to the income tax, is not subject to the doubts which may be entertained respecting the totals of the accumulations themselves. Whatever the figures may be at the beginning and end of the period, such has been the rate of increase. Not only then must the requirements of gold-using people be increased by 50 per cent., to allow for the natural increment of population, but another 50 per cent. must be added for the greater wealth per head. This would further raise the usual requirements according to the previous 1848 standard from the above sum of 9 millions, which allows for the increase of population only to $13\frac{1}{2}$ millions. The same conclusion is reinforced by a consideration of the quantities of goods dealt with in our principal industries. The production of coal in 1846, as you will see by reference to Mr. Mundella's paper last year, was estimated in 1846 at 36,000,000 tons; in 1876 it was 133,000,000 tons: or about three times as much. Between 1854 and 1876, or little more than twenty years, the production was rather more than doubled. The production of pig iron again has increased between 1840 and 1876 from 1,396,000 to 6,556,000 tons, or about five times in less than forty years. The entries and clearances of ships in the foreign trade again have increased from 13,307,000 in 1848 to 51,531,000 tons in 1877, or nearly quadrupled. The imports of raw cotton again have increased from 6 million cwts. in 1848 to more than 12 million cwts. in 1877, or 100 per cent.; and although this seems less striking than some of the previous figures, it is to be noticed on the other side that the exports of cotton-piece goods have risen from 1,096,751,000 yards in 1848 to 3,838 million yards in 1877, or nearly four times. But it would be needless to multiply instances. The peculiarity of the period has been the increase of mechanical invention and the constant augmentation of goods, so that the accumulation of capital above shown is even in less proportion than the increase of the movement in trade which the money in use has to move. It is a moderate calculation that if only the countries which used gold in 1848, including their colonies, were now using it, the requirements to correspond with the increased population and wealth would be at least three times what they were, assuming prices to remain in equilibrium.

Nor is this all. The extension of the area of gold-using coun-

tries since 1848, first, by the practical inclusion of France, and next, by the more recent inclusion of Germany and the United States, has no doubt added to the usual demands to an extent it is unnecessary to determine exactly, but at least by several millions. Thus while during the last thirty years the annual yield of gold has been falling away from its first super-abundance, the current demands for the metal have certainly been growing with marvellous rapidity. If there was much need twenty years ago of new channels for the new gold supplies to prevent an enormous rise in prices, it is at least possible that more recently the increasing current demands have been sufficient to use up the diminishing annual supply. So far as we can judge, the point of junction of the two curves must have been at some date within the last ten years, though in such matters precision is of course impossible. In this view the fall of prices in the last ten years has been aggravated by a subtler cause than the extraordinary demands for gold which have existed. These demands have come upon a market which apparently had no surplus to spare. They have consequently been supplied very largely by a continued pressure upon existing stocks, till an adjustment has at length been made by a contraction of trade and a fall in values.

It may be said, perhaps, that the usual requirements of gold-using countries have been changed from what they were by the extension of the cheque and clearing house system, by the diminished use of gold in the arts, and by similar means. Perhaps there is some diminished use of gold in the arts, but, of course, the only really important question in this matter is the use of gold in coinage, and I should doubt if any great economy in the use of gold has been established in the last thirty years. Excluding Germany and the United States, which have just been added to the number, the principal gold-using countries besides the United Kingdom and its colonies are France, Portugal, Egypt, and the South American countries, but it would be difficult to show, I think, that the cheque system or any other system of economising money has been greatly extended in those countries in the period. In the United Kingdom again all the recognised expedients for economising money—especially the cheque and clearing house system—seem to have been fully operative thirty years ago as they are now. The United Kingdom was very fully “banked” before 1850, the growth of banks and banking business having since been no more than in proportion to the increasing wealth of the community. The circumstances are such however that a considerable allowance may be made for the introduction of economising expedients, without altering the fact that the current gold requirements of the world have increased enormously since 1848, while the annual

supplies which threatened an incalculable rise of prices have been dwindling away.

Let me add, that whatever doubt may be entertained as to the actual meeting of the two curves of demand and supply of gold during the last few years—apart from extraordinary demands—all the facts and circumstances seem to indicate that the meeting point must come very soon unless the supply of gold is increased, or economising expedients introduced and extended. At the recent rate of progress the current demands may be expected to increase at least 20 per cent. every ten years, so that if 20 millions annually are now just sufficient for all purposes, not less than 24 millions will be required ten years hence. In another ten years the annual requirement will be more nearly 30 millions. If we start from a lower total now, say from 16 millions, all the same the figure of 20 millions will soon be exceeded. And this without leaving any margin for extraordinary demands, which experience seems to show are never wanting, so that, as in a budget, allowance should be made for the unforeseen as in some sense more certain than all that is exactly forecast. If the scarcity of gold has as yet contributed very little to our money troubles or the fall in prices, it must at least be about to have that effect if no great change comes. Whether such a change is likely to come in the shape of an increased gold supply it will be for geologists and mineralogists to judge, but it is not reassuring to see how little comes practically of the recent gold discoveries in India and the re-discovery in Midian. Whether on the other hand change may come in the shape of economising expedients will be a point of no little interest for bankers and all other business men, and for legislators. Considering the slowness with which such expedients become effective when they are first introduced, and the perfection to which they have been brought in countries like England where they are introduced, I feel great doubts whether much relief can come in this way. On the whole, I see no other outlet from the situation than in the gradual adjustment of prices to the relatively smaller and smaller supply of gold, which must result from the increasing numbers and wealth of the populations of gold-using countries.

III.—*What the Fall Explains and its Consequences.*

The fact of a fall of prices such as has been described explains a good many things, while the consequences of it, or, to speak more correctly perhaps, of the more permanent of the causes which have contributed to it, must be far-reaching. There are one or two topics of importance in this connection on which I have a few brief remarks to offer.

First, we have a sufficient explanation in the fall of prices of

much of the falling off of trade, especially our foreign trade, which is the occasion of so much alarmist writing. There is a constant assertion by some writers of two alleged facts, one, that our foreign trade is diminishing, the other, that foreign countries are gaining as we lose, from which the inference is that the decline of our trade is to be accounted for by the successful competition of foreigners. Indeed, it is sometimes said that the foreigner is taking the bread out of the mouths of our manufacturers and the men whom they employ. I have never seen this view supported by any careful examination of what the growth of the trade of foreign countries really is, or by a consideration of what goes on in our trade generally, and not merely in particular trades which may be affected here and there by the pressure of foreign competitors; but the question of the fall of prices appears to open up a new view. What if there is no falling off, or no material falling off of our trade at all, so that all this writing about our decaying trade, and the gain of foreigners at our expense is only so much writing in the air? It is clear that an average fall of 20 or 30 per cent. in prices must make all the difference in the world. We are not left to conjecture in the matter. The exports of British and Irish produce show a falling off in total value between 1873 and 1877 of about 22 per cent.

	£
The exports in 1873 were	255,165,000
„ „ '77 „	198,893,000
Reduction	<u>56,272,000</u>

which is almost exactly in the proportion stated. But we have already seen that while the index number of 73·1 falls to be increased in 1873, when a comparison is made with 1861 prices, by the sum of 20·60, the index number falls to be decreased in 1877 by 2·04, so that there has been an average fall of price between 1873 and 1877 of more than 20 per cent.* There is nothing in the figures then to imply that the quantities of the articles exported in 1877 were less than in 1873. To throw farther light on the point, I extract from the report to the Board of Trade already referred to, a table in which the prices of the articles of export enumerated in the statistical abstract, according to their declared values in 1873, have been applied to the quantities exported in 1877. The result is, that while the aggregate declared value of these enumerated articles in 1877 was 147,801,000*l.*, their aggregate value at the prices of 1873 would have been 191,530,000, which is within a million of the aggregate value of the exports of the same articles in 1873. There are variations in the quantities of the

* And exclusive, of course, of the additional fall in 1878.

articles, some increasing, and others diminishing between 1873 and 1877, but the upshot is that if the prices of 1873 had been maintained all round in 1877, the returns as far as the enumerated articles are concerned, and presumably as regards the remaining articles of trade where the entries are mostly by value only, would have exhibited no decline at all.

It cannot be maintained of course that a fall of values only is immaterial. Profits depend on price, and this is an especially important consideration in the foreign export trade as regards articles exclusively or mainly of British origin, and where a large part of the value is not constituted by the cost of the raw material previously imported. Our trade may consequently be less profitable, though the quantity we turn out has not diminished. But other countries must suffer by the fall in price exactly as we do ourselves, and the question here is not of the profitableness of the trade at a given time, but of its extent; and as to this the impression that our foreign trade has diminished to any material extent during the last few years may be pronounced to be absolutely without foundation. Regarding profit, moreover, I may be allowed to say in passing, a good deal might be urged in favour of a time like this being really the most profitable in the end, notwithstanding all the complaints of depression. Much of the prosperity of years like 1873 is in reality hollow, and much of the dullness of dull times is due to the fact that people are forced to acknowledge themselves not so rich as they thought. But this is perhaps taking us away from the matter in hand, which is that of the volume of our trade only.

To be quite fair, it must be acknowledged that holding our own in such matters is not all that is necessary. If business is to be in a real equilibrium, there should be a steady increase in it *pari passu* with the increase of population. There has been some real check then to the growth of our foreign trade during the last five or six years. But on the other hand, we must remember that previous to 1873 there was a marvellously rapid growth, much above the annual average. All things considered, it is yet too soon to complain of the check of the last five years as indicating the beginning of a permanent retrogression.

The *second* point I shall advert to is the possible connection between the appreciation of gold and the depreciation of silver. It is an obvious enough suggestion that as silver in the markets of gold-using countries is only a commodity, it will probably sympathise with any general movement in the prices of commodities. Indeed, it has been urged by the Calcutta government that it is not silver which has changed but gold. Silver prices they say have not perceptibly risen in the Indian markets, although gold has risen. Without going into detail on this subject, which

would take up a whole paper by itself, and which we may safely leave to Mr. Bourne when he comes to read his paper on the silver question, I may be allowed to remark that very likely gold and silver have *both* changed. One or two of the causes we have described as likely to produce a general fall in prices—the prolonged discredit and the bad harvests—have been as applicable to silver-using as to gold-using countries, and have surely been applicable to India and China with their tremendous famines and much rottenness in their foreign trade. It was therefore possible that silver prices should have fallen like gold prices, and the relation between the two metals have been left unchanged; if silver prices have been stationary, or have not fallen so much as gold prices, then as we cannot be sure how much the scarcity of gold has aggravated the fall of prices here, it is difficult to argue from the fall of silver in relation to gold that the difference between them arises from an appreciation of gold only. There may have been depreciation of silver as well, even if of a temporary kind only; the events of the last few years relating to silver—especially the sudden sales of the stocks of German silver, and the stoppage of silver coinage by the Latin union—being calculated to have that effect. The wonder perhaps rather is that silver has not depreciated still more. Possibly the stock in use in the silver countries is so large that great additions can be easily absorbed; but the change has yet to be tested, we must remember, by a period of good business and naturally rising prices in the silver-using countries. So far as it goes, however, the depreciation of silver in relation to gold, whatever changes may have occurred in silver itself in relation to other commodities, is not inconsistent with the supposed change in gold in relation to such commodities.

A *third* point to notice is the connection between a great fall in the prices of commodities and a fall in wages. The two things are inseparably connected. First, in certain trades—and this connection has been specially shown of late years in the iron trade—the gross price of the articles produced is so much diminished, that if the cost of labour is unaltered the labourer will be receiving an enormously increased share of what is produced. Say an article formerly selling for 20*l.*, the cost for labour being one-fourth or 5*l.*, falls in price to 10*l.*, then the 5*l.* given to the labourer would be 50 per cent. of the selling price. It is incredible that so great a change could occur without the labourer being affected, and there have been even greater changes in the iron and coal trades. But, *second*, in almost all trades, especially those in which the cost of labour constitutes a large part of the cost of production, there is necessarily some connection, in the long run, between the money rate of wages and the prices of the usual articles of the labourer's

consumption, according to his standard of living. It would take us out of our way to enter into a controversy here about the wages-fund, but it is quite plain that the real wages paid by the capitalist to the labourer consist mostly of commodities; if money wages remain the same while commodities fall in price, there is an increase of real wages. In some way or other, then, an adjustment of money wages to reduced prices becomes inevitable. In miscellaneous industries this may be effected by the constant action of individual interests when changes of employment occur; by the steady substitution of superior for inferior workmen; by the transfers of business enabling wages of clerks and others to be revised; and by similar means. In more conspicuous trades, where large groups of men are employed, there are notices of reduction on a large scale as well as these minor instruments of effecting a reduction. But nominal reduction must come somehow, unless there is to be a real rise in wages. The visible opportunity of employers is of course the scarcity of employment, and the disorganisation of industry which attend a great fall of prices; but employers would obviously be unable to continue paying for any length of time really increased wages. There is no Fortunatus's purse which would not quickly be exhausted in such an attempt.

There is another subject of, perhaps, greater complexity which seems to be suggested. If a general downward movement of prices, due to a comparative scarcity of gold, has begun, are we not on the eve of a reversal of the changes which commenced with the Australian and Californian discoveries—changes so admirably described in Mr. Jevons's well-known book? These changes were substantially a gradual lightening of debts for the benefit of the debtor class, and to the immediate loss of annuitants and capitalists however much the latter might be compensated in the end by an increase in the nominal income of their land, houses, and other securities. Now we may witness a gradual increase of the burden of debts to the loss of debtors, and for the immediate advantage of creditors, although, in the end, the latter may lose by the relatively diminished nominal income of their securities, following the adjustment of all prices to the new circumstances. There can be no doubt that some such general effect as this must follow, if it should, in fact, turn out that a serious appreciation of gold has set in, and the circumstances of its production and the use of economising expedients do not change. In the end the effect in contracting trade is looked forward to with some apprehension by many of our best authorities.

I do not propose to dispute this conclusion here. It would land us in an almost endless controversy if we were to discuss whether a constant influx of new money, leading to a prolonged rise in prices,

does more good or harm in the long run, than a constant failure of new supplies to meet current demands leading to a prolonged fall in prices. A great deal, I imagine, could be said on both sides; the rebound from excessive inflation more than compensating perhaps all its alleged benefits, and the additional fall in prices due to a gradual scarcity of gold being as nothing when compared with the falls which take place from time to time owing to the simple failure of credit. But while avoiding this discussion, I may at least point out that the most serious effects of this incipient gold scarcity will probably be gradual, just as the effect of the discoveries in causing a rise of prices has been much more gradual and confined within narrower limits than economists were in the habit of anticipating. Particularly at the present moment the depression may have gone so far that the accumulating stocks of the precious metals will be sufficient for a good while to support a considerable expansion of trade—that it will only be later on, as prices tend to get back to the former level, that the real pressure of the scarcity will be felt. A year or two's ease in the money market following the events of last year will however be no proof at all that the causes above described have not been operative and will not again be operative.

IV.—*Concluding Observations.*

In bringing this long paper to a close, I have only one or two practical observations to offer. The “moral” of much that has been said is clearly this—that if possible the scarcity of gold which has contributed to the present fall of prices, and may have farther serious effects in future, should, if possible, be mitigated, and should at any rate not be aggravated, by legislative action. I have expressed great scepticism as to whether, in fact, seeing how slow men's habits are to change, any mitigation is probable in the shape of expedients for economising money. But it must be recognised that if bodies of men were amenable to reason in currency questions, and there was really a widely felt belief of serious mischief impending from a gold scarcity, some economising expedients could be tried. To give only one illustration: I suppose few things are more unlikely than that 1*l.* notes, or notes for less than 5*l.*, will again be reintroduced in England, but the introduction of such notes alone, with all suitable arrangements for their convertibility, would certainly go far to neutralise even such another extraordinary demand as that for the German coinage. The German demand for gold would itself have been much smaller than it was, but for the banking reform which accompanied the coinage, and part of which reform was the abolition of notes of small denominations. The United States' pressure for gold during the last few months would also have been far more serious than it has been, if

the Government of that country had complicated its resumption arrangements by the abandonment of all greenbacks of from 5 to 25 dollars, and the prohibition of bank notes for such amounts. There seems a possibility of gaining something then by reintroducing 17. notes if the present gold scarcity should continue. I hope I shall not be understood as advocating such a change, or as being insensible to the weight of many practical objections which could be urged against it if it were immediately proposed. I am only mentioning it as a possible expedient for economising money, and there are no doubt others. As regards small notes, however, it would seem that at least any change by countries which still retain them in the direction of their further abolition, leading to a greater demand for the precious metal, ought to be deprecated. Still more we ought to deprecate any change in silver-using countries in the direction of substituting gold for any part of the silver in use. It would be nothing short of calamitous to business if another demand for gold like the recent demands for Germany and the United States were now to spring up. Even a much less demand would prove rather a serious affair before a very long time elapsed.

APPENDIX.

I.—Prices of Leading Wholesale Commodities in January of each of the undermentioned Years.

[The Quotations, with the exception of two New York Quotations, are those of leading Wholesale Markets in the United Kingdom].

	January. 1873.	January. 1874.	January. 1875.	January. 1876.	January. 1877.	January. 1878.	January. 1879.
Iron, Scotch pig.....per ton	127s.	107s. 6d.	80s.	64s. 3d.	57s. 6d.	51s. 6d.	43s.
Coal, Hetton	30s.	27s. 6d.	30s.	25s.	19s.	18s. 6d.	19s.
„ Wallsend							
Copper, Chili bars	91l.	84l.	83l. 10s.	82l.	75 10s.	66l.	57l.
Tin, Straits	142l.	120l.	94l.	82l.	75l. 10s.	66l.	61l.
Wheat, Gazette aver- age	55s. 11d.	62s. 1d.	44s. 8d.	45s. 9d.	51s. 6d.	51s. 9d.	39s. 7d.
„ Red Spring at New York							
Flour, town made	47s. 6d.	53s. 6d.	38s. 6d.	42s. 6d.	40s.	46s.	37s.
„ New York price p. brl.	\$7.5	\$7.10	\$5.15	\$5.50	\$6.00	\$5.50.	\$3.70*
Beef, inferior	3s. 10d.	3s. 9d.	3s. 8d.	4s. 3d.	3s. 3d.	2s. 10d.	2s. 10d.
„ prime small							
Cotton, mid. Upland....per. lb.	10d.	8½d.	7¼d.	7d.	6¾d.	6½d.	5¾d.
Wool	23l.	19l. 15s.	18l. 5s.	17l. 10s.	16l. 10s.	15l. 10s.	13l.
Sugar, Manilla, Muscov. p. cwt.	21s. 6d.	18s.	17s.	15s.	22s.	14s. 6d.	16s.
Coffee, Ceylon, good, } ordinary }	80s.	112s. 6d.	84s.	90s. 6d.	87s. 6d.	84s. 9d.	65s.
Pepper, black Malabar per lb.	7d.	8¼d.	7d.	5¾d.	5⅛d.	4½d.	4¼d.
Saltpetre, foreign	29s.	23s. 9d.	22s. 6d.	18s. 6d.	20s.	22s.	19s.

* See note on p. 38, *supra*.

II.— Wholesale Prices, 1845-77. *Proportionate Results.*

Deduced from a table of prices on the basis of representing by the Number 100 the Average Prices of the Six Years 1845-50.

[Extracted from the Commercial History and Review of the "Economist" for 1877.]

Dates.	1 Coffee.	2-3 Sugar.	6 Tea.	7 Tobacco.	9 Wheat.	10-13 Butcher's Meat.	15 Cotton.	16 Silk, Raw.	17-18 Flax, and Hemp.	19-22 Sheep's Wool.	24 Indigo.
1845-50, avg. 6 years }	100	100	100	100	100	100	100	100	100	100	100
'57 1st July	151	123	162	210	118	105	95	204	121	146	121
'58 1st Jan.	114	83	140	195	90	114	73	156	113	105	163
'65 1st "	161	65	108	322	72	123	363	157	132	159	137
'66 1st "	179	72	141	222	89	129	383	200	140	144	126
'67 1st "	149	66	108	200	113	121	227	183	116	144	145
'68 1st "	141	73	104	200	127	112	100	161	121	115	154
'69 1st "	127	72	105	167	96	117	155	183	124	104	143
'70 1st "	134	83	102	167	80	123	173	174	116	96	151
'71 1st "	125	83	100	155	100	133	118	183	116	88	137
'72 1st "	145	83	100	189	104	134	141	169	115	133	159
'73 1st "	171	74	100	195	104	144	132	169	118	157	169
'74 1st "	233	68	108	183	116	146	121	149	118	140	123
'75 1st "	173	68	100	256	80	137	111	115	95	145	163
1st July	179	63	100	256	81	157	109	96	97	134	150
'76 1st Jan.	183	67	100	256	84	153	107	87	105	133	130
1st July	164	59	100	233	88	145	93	104	114	102	137
'77 1st Jan.	178	88	116	211	97	138	94	187	99	141	173
1st July	180	85	116	200	114	145	94	148	99	123	147
'78 1st Jan.	183	85	111	189	98	135	93	143	92	122	169
'79 1st Jan.	165	85	105	155	77	125	75	110	70	102	160

Dates.	25-27 Oils.	28-29 Timber.	30 Tal- low.	31 Leather.	34 Copper.	35-36 Iron.	37 Lead.	39 Tin.	42 Cotton Wool. Pernam- buco only.	43 Cotton Yarn.	44-45 Cotton Cloth.	Total Index No.	Total NoteCir- culation, Great Britain.
1845-50, avg. 6 years }	100	100	100	100	100	100	100	100	100	100	100	2,200	100
'57 1st July	141	103	147	150	133	121	143	166	97	126	113	2,996	101
'58 1st Jan.	121	100	118	130	121	110	131	127	86	123	99	2,612	98
'65 1st "	129	97	93	131	101	95	115	115	325	323	252	3,575	102
'66 1st "	141	91	112	131	122	100	123	122	267	308	222	3,564	105
'67 1st "	140	95	106	128	98	88	114	99	191	215	178	3,024	108
'68 1st "	138	94	98	136	96	86	111	112	181	118	114	2,682	112
'69 1st "	127	97	111	136	89	85	109	129	139	149	131	2,666	108
'70 1st "	126	99	105	128	83	88	109	138	144	154	135	2,689	110
'71 1st "	114	115	102	128	81	87	103	160	106	138	118	2,590	111
'72 1st "	122	116	111	133	103	99	109	177	119	149	125	2,835	118
'73 1st "	118	127	98	144	105	141	124	171	126	154	126	2,947	119
'74 1st "	110	125	93	147	104	167	139	143	106	136	116	2,891	122
'75 1st "	111	132	108	153	105	138	137	118	95	122	116	2,778	123
1st July	111	125	93	150	100	126	126	106	96	121	116	2,692	130
'76 1st Jan.	116	128	120	147	100	125	131	99	106	123	111	2,711	130
1st July	107	128	107	140	94	111	121	94	80	113	97	2,531	130
'77 1st Jan.	114	128	102	144	93	104	126	95	82	108	113	2,715	130
1st July	114	132	99	150	85	94	118	87	82	105	108	2,625	130
'78 1st Jan.	110	132	89	150	81	91	109	85	82	104	101	2,554	123
'79 "	90	110	80	150	73	80	88	82	75	82	88	2,227	—

III.—*Tables of Prices from Paper by Mr. Ellis, on the "Money Value of Food and Raw Materials," published in "Statist" of 8th June, 1878.*

[Prices computed from the quantities and values of the articles imported as stated in the Board of Trade returns.]

A.—*Average Prices of Selected Articles for Various Years.*

	1859.	1869.	1873.	1876.	First Quarter of 1878.
1. Food, &c.	£	£	£	£	£
Animals, oxen per head	13·70	17·40	16·80	21·03	20·0
„ sheep „	1·78	1·72	2·14	2·14	2·30
Butter per cwt.	4·90	5·30	5·42	5·85	5·75
Cheese „	2·56	3·15	3·0	2·77	3·50
Coffee per lb.	0·031	0·028	0·040	0·043	0·042
Wheat per cwt.	0·460	0·520	0·650	0·521	0·612
Barley „	0·368	0·420	0·434	0·308	0·452
Maize „	0·334	0·335	0·343	0·318	0·335
Flour „	0·720	0·70	0·940	0·80	0·910
Spirits of all kinds per gall.	0·188	0·184	0·226	0·188	0·185
Sugar, raw per cwt.	1·30	1·23	1·20	1·05	1·12
Tea per lb.	0·077	0·074	0·070	0·070	0·065
Tobacco „	0·032	0·035	0·032	0·035	0·033
Wine per gall.	0·340	0·306	0·380	0·350	0·356
2. MATERIALS.					
Cotton per cwt.	3·16	5·21	4·02	3·02	2·89
Dyes, Indigo „	30·50	36·90	28·0	24·20	24·25
Flax „	2·76	2·83	2·50	2·52	2·95
Hides, dry „	3·72	3·49	4·14	4·32	3·18
Coal* per ton	0·466	0·483	1·05	0·547	0·487
Copper, unfinished per cwt.	5·37	3·50	4·38	4·0	3·55
Iron, raw* per ton	2·86	2·90	6·23	3·13	2·69
Silk per lb.	1·02	1·22	1·05	0·96	0·90
Tallow per cwt.	2·75	2·27	2·05	2·14	2·0
Wood, sawn or split... per load	2·85	2·55	3·08	2·78	2·75
Wool per lb.	0·074	0·057	0·061	0·065	0·059

* Export prices of these articles.

B.—Aggregate Prices of Chief Articles Imported and Produced.

[Allowance being made for their relative importance, so that the purchasing power of money can be arrived at in the various periods.]

The year 1869 is taken as the standard, and the comparative value of a given sum then and at other periods is calculated from the above list of prices.

Articles Imported or Produced.	Index Number showing the Comparative Importance of each Article in Relation to the Total, i.e., 100.	Relative Cost in				
		1859.	1869. Standard.	1873.	1876.	1878. First Quarter.
Animals, oxen....	8	6'300	8'000	7'700	9'670	9'115
„ sheep..	6	6'200	6'000	7'470	7'460	8'020
Butter	2	1'850	2'000	2'050	2'200	2'170
Cheese	1	810	1'000	950	880	1'110
Coffee	1	1'110	1'000	1'430	1'540	1'500
Wheat	15	13'270	15'000	18'750	15'030	17'655
Barley	3	2'630	3'000	3'100	2'200	3'230
Maize	2	1'990	2'000	2'050	1'900	2'000
Flour	4	4'110	4'000	5'370	4'570	5'200
Spirits	1	1'020	1'000	1'230	1'020	1'005
Sugar	4	4'230	4'000	3'900	3'410	3'640
Tea	3	3'120	3'000	2'840	2'840	2'635
Tobacco	1	910	1'000	910	1'000	945
Wine	2	2'230	2'000	2'480	2'290	2'325
Cotton.....	19	11'520	19'000	14'660	11'010	10'540
Indigo.....	1	820	1'000	760	650	655
Flax.....	3	2'930	3'000	2'650	2'660	3'130
Hides	1	1'070	1'000	1'190	1'240	910
Coal.....	8	7'720	8'000	17'430	9'060	8'065
Copper	1	1'530	1'000	1'250	1'140	1'010
Iron, raw.....	2	1'980	2'000	4'300	2'160	1'855
Silk	2	1'670	2'000	1'720	1'570	1'475
Tallow.....	1	1'220	1'000	900	940	880
Wood	2	2'240	2'000	2'480	2'190	2'160
Wool	7	9'090	7'000	7'490	7'980	7'245
	100	91'570	100'000	115'060	96'610	98'475

IV.—*Estimated Production of Gold throughout the World from 1852 to 1875 : showing the Total for each Quinquennial Period, and the Average Annual Amount in such period. Compiled from Paper handed in to the Committee on Depreciation of Silver by SIR HECTOR HAY. No. 338 of Session 1876, Appendix, p. 25.*

[In thousands of pounds, 000's omitted.]

Years.	Total Production of Gold.	Average Annual Production in Quinquennial Period.
	£	£
1852.....	36,550,	} 29,933,
'53.....	31,090,	
'54.....	25,490,	
'55.....	27,015,	
'56.....	29,520,	
Total in 5 years	149,665,	
1857.....	26,655,	} 24,633,
'58.....	24,930,	
'59.....	24,970,	
'60.....	23,850,	
'61.....	22,760,	
Total in 5 years	123,165,	
1862.....	21,550,	} 22,760,
'63.....	21,390,	
'64.....	22,600,	
'65.....	24,040,	
'66.....	24,220,	
Total in 5 years	113,800,	
1867.....	22,805,	} 21,753,
'68.....	21,945,	
'69.....	21,245,	
'70.....	21,370,	
'71.....	21,400,	
Total in 5 years	108,765,	
1872.....	19,910,	} *19,200,
'73.....	19,240,	
'74.....	18,150,	
'75.....	19,500,	
Total in 4 years	76,800,	

* Average of four years only.

TABLE V.—Statement of the Quantity and Value of the Exports of the Undermentioned Articles in 1873, with the Average Prices at which they were Exported; of the Quantity of the same Articles Exported in 1877, and the Values they would Exhibit at the Average Prices of 1873, and of the Actual Values Declared in 1877.

[From Report to the Board of Trade on the Prices of Exports of British and Irish Produce in 1861-77.] [000's omitted in columns of quantities.]

Articles.	Quantities of Articles Exported in		Average Prices of Articles in 1873, deduced from the Declared Quantities and Values.	Declared Values of Articles Exported in 1873.	Computed Values of Articles Exported in 1877 at the Prices of 1873.	Declared Values of Articles Exported in 1877.
	1873.	1877.				
Alkali cwt.	4,754,	5,686,	12'32s.	2,929,006	£ 3,502,572	£ 2,197,161
Animals, horses .. No.	3,	2,	62'95l.	177,262	142,141	168,070
Arms and ammunition—						
Firearms, small ..	354,	251,	29'13s.	515,260	365,024	263,793
Gunpowder lbs.	16,627,	16,155,	6'38d.	442,170	429,452	394,577
Bags, empty doz.	4,430,	4,921,	8'64s.	1,913,153	2,125,936	1,518,611
Beer and ale brls.	585,	461,	82'81s.	2,422,020	1,909,017	1,901,399
Books, printed cwt.	84,	84,	10'88l.	913,846	918,250	897,742
Butter "	45,	37,	118'14s.	265,585	220,833	247,033
Candles, of all } lbs.	6,593,	6,085,	8'04s.*	220,776	203,863	195,916
sorts }						
Carriages, railway No.	3,	2,	111'68l.	366,096	268,479	202,805
Cement cwt.	4,348,	4,492,	3'04s.	660,444	682,799	579,763
Cheese "	19,	17,	86'30s.	81,063	72,298	69,698
Coals, cinders } tons	12,618,	15,420,	20'90s.	13,188,511	16,113,952	7,844,486
and fuel }						
Cordage and twine cwt.	120,	106,	59'70s.	359,643	317,120	294,758
Corn—						
Wheat "	1,128,	208,	13'47s.	759,605	140,041	135,132
Wheat, flour "	46,	29,	18'97s.	43,828	27,508	25,268
Cotton yarn lbs.	214,779,	227,651,	17'76d.	15,895,440	16,846,204	12,192,954
Cotton manufac- tures—						
Piece goods, } yards	2,384,174,	2,699,282,	3'45d.	34,283,471	38,802,180	31,809,747
white or plain }						
Piece goods, } "	1,083,306,	1,125,255,	4'78d.	21,580,770	22,411,333	20,218,715
printed, checked, or dyed }						
Of mixed materials . }	16,255,	13,284,	9'29d.	628,941	514,184	413,987
Fish, herrings brls.	724,	650,	28'38s.	1,026,978	921,992	1,056,069
Glass—						
Plate sq. ft.	2,183,	1,157,	3'01s.	328,699	174,138	128,663
Flint cwt.	124,	96,	57'88s.	359,265	278,316	268,229
Common, } bottles ... }	908,	613,	10'18s.	461,918	311,886	336,754
Of other sorts .. "	117,	84,	33'06s.	192,752	138,044	120,823
Hats of all sorts . doz.	598,	889,	29'46s.	880,787	1,308,815	1,106,556
Leather—						
Tanned, Un- wrought .. cwt.	116,	144,	9'00l.	1,048,909	1,299,879	1,165,134
Wrought, boots, and shoes } doz.	528,	436,	64'73s.	1,707,886	1,411,651	1,336,478
Of others sorts lbs.	1,655,	1,481,	3'68s.	304,898	272,545	305,175

* Per dozen lbs.

TABLE V.—*Quantity and Value of Exports of the Undermentioned Articles in 1873, with the Average Prices at which they were Exported, &c.—Contd.*
 [000's omitted in columns of quantities.]

Articles.	Quantities of Articles Exported in		Average Prices of Articles in 1873, deduced from the Declared Quantities and Values.	Declared Values of Articles Exported in 1873.	Computed Values of Articles Exported in 1877 at the Prices of 1873.	Declared Values of Articles Exported in 1877.
	1873.	1877.				
Linen and jute yarn—				£	£	£
Linen yarn lbs.	28,734,	19,216,	16'51 <i>d.</i>	1,976,830	1,321,901	1,291,729
Jute yarn	12,264,	14,998,	4'04 <i>d.</i>	206,521	252,461	217,424
Linen and jute manufactures—						
Linen manufactures—						
White or plain yards	195,404,	159,275,	7'62 <i>d.</i>	6,204,800	5,056,970	4,597,665
Printed, checked, or dyed	8,198,	14,411,	7'63 <i>d.</i>	260,639	458,155	471,982
Sailcloth and sails	4,522,	4,081,	13'97 <i>d.</i>	263,276	237,532	233,180
Jute manufactures....	95,935,	116,753,	3'98 <i>d.</i>	1,590,850	1,936,154	1,547,408
Metals; Iron—						
Old, for re-manufacture	tons 60,	23,	6'62 <i>l.</i>	399,522	154,968	100,788
Pig and puddled ..	1,142,	882,	124'65 <i>s.</i>	7,118,037	5,497,433	2,528,655
Bar, angle, bolt, and rod	287,	248,	13'09 <i>l.</i>	3,755,980	3,246,189	1,928,103
Railroad of all sorts....	785,	498,	13'27 <i>l.</i>	10,418,852	6,611,857	3,868,106
Wire	29,	51,	23'52 <i>l.</i>	692,470	1,201,684	752,278
Sheets, boiler, and armour plates..	115,	89,	17'95 <i>l.</i>	2,056,932	1,601,014	1,140,417
Galvanised ...	32,	54,	26'95 <i>l.</i>	867,271	1,467,832	1,109,374
Hoops	55,	56,	14'58 <i>l.</i>	798,686	823,172	482,522
Tinned plates	121,	153,	32'77 <i>l.</i>	3,953,042	5,021,216	3,033,126
Cast or wrought, &c.	282,	255,	19'43 <i>l.</i>	5,478,759	4,947,033	3,645,661
Steel, unwrought ..	39,	24,	37'11 <i>l.</i>	1,462,857	901,476	807,850
Manufactures of steel	10,	11,	69'55 <i>l.</i>	728,831	787,376	717,035
Copper—						
Unwrought, ingots, cakes, or slabs	cwts. 259,	232,	4'68 <i>l.</i>	1,212,612	1,084,468	876,358
Wrought or partly wrought—						
Mixed or yellow metal	231,	341,	4'29 <i>l.</i>	990,160	1,464,057	1,207,073

TABLE V.—Quantity and Value of Exports of the Undermentioned Articles in 1873, with the Average Prices at which they were Exported, &c.—Contd.

[000's omitted in columns of quantities.]

Articles.	Quantities of Articles Exported in		Average Prices of Articles in 1873, deduced from the Declared Quantities and Values.	Declared Values of Articles Exported in 1873.	Computed Values of Articles Exported in 1877 at the Prices in 1873.	Declared Values of Articles Exported in 1877.
	1873.	1877.				
Copper—Contd.				£	£	£
Of other sorts . cwt.	209,	225,	5'18l.	1,084,701	1,163,744	975,102
Brass of all sorts	84,	92,	5'99l.	500,720	550,128	440,620
Lead — pig, sheet and pipe	tons 32,	42,	23'75l.	760,294	1,008,591	912,498
Tin, unwrought	cwt. 115,	122,	6'83l.	786,156	833,158	448,864
Zinc, wrought and unwrought	„ 69,	116,	24'92s.	85,746	144,237	119,793
Oil, seed	galls. 11,157,	16,549,	2'64s.	1,471,071	2,184,426	1,971,912
Paper, other than hangings	cwt. 320,	321,	3'04l.	973,617	976,311	901,934
Salt	tons 841,	834,	18'77s.	789,054	782,428	462,575
Silk manufactures—broad piece goods ..	yards 2,984,	4,356,	3'54s.	528,266	771,029	701,408
Soap	cwt. 184,	299,	26'45s.	243,047	395,452	365,594
Spirits, British	galls. 1,686,	1,530,	2'50s.	210,964	191,256	374,204
Sugar, refined	cwt. 697,	1,119,	30'02s.	1,045,751	1,679,681	1,542,160
Wool, sheep and lambs	lbs. 7,035,	9,549,	21'18d.	620,848	842,699	705,610
Woollen and worsted yarn ..	„ 34,745,	26,973,	37'26d.	5,393,493	4,187,486	3,609,456
Woollen and worsted manufactures—Cloths, coatings, &c., unmixed and mixed ..	yards 38,634,	44,125,	41'00d.	6,599,635	7,538,056	6,567,806
Flannels, blankets, &c.	„ 14,447,	16,059,	18'10d.	1,089,864	1,211,086	1,176,377
Worsted stuffs, mixed, and unmixed ..	„ 282,885,	194,777,	12'11d.	14,277,382	9,828,125	7,725,414
Carpets and druggets ..	„ 9,921,	6,454,	38'64d.	1,597,383	1,039,166	847,763
Total	—	—	—	192,453,901	191,530,459	147,801,320

DISCUSSION *on* MR. GIFFEN'S PAPER.

AFTER some remarks by Mr. Crickmay,

Mr. E. K. FORDHAM said it appeared to him that the low prices which prevailed at the present time arose very much from circumstances which were in themselves favourable, and which ought to produce great prosperity in the world. They arose from the improvement in machinery and from the inventive power of man being improved for the production of almost every article. Steel had been substituted for iron, and was now selling at about half the price that iron was selling at a comparatively short time ago. This steel probably represented twice the wearing value of iron; therefore the cost of steel now, as compared to that of iron of perhaps ten or fifteen years ago, is only one-fourth of what it was at that period; and this was surely enough to account for cheaper imported corn. With respect to these articles of food, cheap iron also produced cheap steam vessels, and cheap coal produced cheap motive power from the United States of America; and that, in connection with cheap agricultural implements and improved methods of agriculture in America, would account chiefly for the cheap animal and vegetable food from America. Therefore it was not to be expected that these articles would be sold at a higher price for some time to come. The future price of these commodities here would be their price in the United States with cost of carriage added. Improved machinery had also produced cotton and other goods, as well as a large quantity of wool from the colonies, thus affecting the woollen trade. With respect to the consumption in this country, it had fallen off very little. He should not be surprised, if the amount of animal food consumed could be ascertained, it would be found that it was greater now than at almost any former period. He thought that the wages of this country at the present time represented a larger purchasing power than they had ever done. With regard to the strikes of the servants on railways, he thought they were extremely unreasonable. He believed that the wages which they had received up to the present time, as compared to the wages received at this time last year, represented an increased purchasing power of something like 20 per cent. He thought the same would apply to agricultural labourers, of whom he employed a large number in Hertfordshire cultivating 600 acres of arable land. Last year at this time their wages were 13s. a-week and he had reduced them to 12s.; because the quartern loaf last year was 7d., and this year it was sold at 5d., and the labourers expressed themselves satisfied with the reduction. He did not think that the manufactures of this country would rise very much higher for some time to come, and rents as well as wages would have to be reduced.

Professor JEVONS said that Mr. Giffen's paper seemed to be such a thorough one that he felt there was little to say upon it, and he could only offer very mild criticism. There was one point, however, which he thought Mr. Giffen had made too much of, namely, the increased necessity for the use of gold. He (Professor Jevons) quite admitted that in regard to the German coinage, the want of gold for the American resumption, and the results generally of what was called the demonetisation of silver, these had produced a sudden demand; but it was only temporary, because there were no other nations that would do what Germany had done on the same scale. There was no likelihood of Russia wanting a hundred millions sterling of gold, and he thought India should not have a gold currency. Allowing that there was now a sudden and great demand, he thought Mr. Giffen had over estimated the general demand for gold. He (Mr. Giffen) had said that the economising of currency had not been progressing, and that he was not aware that there had been any increase in the use of bank cheques; but he apprehended that on that point Mr. Giffen had not been quite accurate. Although the increase in the consumption of coals and in the production of other things had been very great, it would be found that the note circulation of the Bank of England had not increased in anything like that degree. No doubt the circulation was larger than ever it was before; but when, after the subsidence of the present discredit, it was restored to its usual amount, it would be found that there was only 5,000,000*l.* or 6,000,000*l.* of increase. Then he believed that in other parts of the world the use of cheques was increasing. In Australia, for instance, all large transactions were done by cheques, cheques were even used for small currency in some parts, and what was not done by cheques was mostly done by 1*l.* notes and 5*l.* notes. In the United States the cheque and clearing system was advancing very much, and he apprehended it would spread to Canada. The very slight demand for gold at the resumption of payments was proof that the Americans really did not want to use much gold. There would not really be the same extensive continued demand for gold that there had been, and this led him to hope that some of the worst predictions of the paper would not be fulfilled, that was to say that there would not be a continuous fall of prices lasting for any long time. No doubt the reasons for the present depression in prices were multifarious. Mr. Giffen had indicated the principal ones, although, perhaps, he may not have exhausted the reasons as to why there had been such a fall. He apprehended that to a certain extent what had occurred had only been the recurrence of what was going on when the gold disturbance began in 1849. If 1820 was compared with 1850, there would be found a remarkable fall of prices. Admitting that gold discoveries had caused a rise in prices, it would have been much greater had there not been a tendency to fall at the same time; and he thought that the tendency to a general fall in price was existing now. What was the reason of this tendency it was difficult to say. It might be due to the increase in the means of production. As Mr. Fordham had explained, the improvement of machinery meant the increase

of production and the saving of labour, but that, no doubt, was a difficult question. Of course the state of prices was aggravated at the present time by what he thought was equivalent to a panic, namely, as great a state of discredit as had been known for a long time back. No doubt this was only a temporary occurrence, as seemed to be admitted. It was what happened about ten or twelve years ago, and about ten years before that, and although the depression of trade was now as bad as it could be, he apprehended that Mr. Giffen allowed that this extreme discredit was only a temporary matter, and that in a year or two a very different view of the subject would be taken, provided, indeed, that the sun exhibited its proper number of spots. Although he did not want to enter into that question, he must say that he really could never see what was amusing in it. The sun was about the most serious question of the day; and he might add to the sinister aspects of Mr. Giffen's paper by remarking that there was really no appearance of the revival of the sun's activity at present. Astronomers had been looking with considerable anxiety for the last year or two, and there were no signs that the sun would soon resume its usual periodic activity. He had no doubt that the three bad harvests which Mr. Giffen had mentioned were really connected with the deficiency of solar radiation. Every chemist and agriculturist and everybody who knew anything about the subject, knew that corn grew by the heat of the sun; therefore, if there was a deficiency of the sun's radiation, there was likely to be a deficiency in the harvest. He hoped there might not be any further reason for adding to the dispiriting tendencies of the times; but he felt sure that a considerable part of the present depression was due to a periodic revulsion from which the country would recover in a short time.

Mr. STEPHEN BOURNE thanked Mr. Giffen for his able paper, which he said was a very exhaustive one on the subject of which it treated. If they did not altogether agree with Mr. Giffen's conclusions, they must agree as to the ability with which they had been set forth, and also as to the extreme importance of the subject for general consideration. Mr. Giffen, in speaking of the causes which he assigned as bringing about a fall in prices, alluded to the great discredit that existed at the present time. He (Mr. Bourne) did not think that there was sufficient discrimination between that which was temporary and that which was lasting. No doubt the present state of discredit had a great deal to do with the fall in prices. There was less speculation than formerly existed, and the prices run up to some time ago were fictitious. There had been too many people speculating on the chance of a rise, and the absence of speculation at present operated against the rise taking place. He thought the present depression in prices, so far as it arose from this cause, might be of temporary and fleeting nature; but beyond that there were more permanent causes, and though prices were lower than they had been, he was inclined to think that they would go a great deal lower still. As to the bad harvests, there was no doubt that they tended to produce a temporary increase of price in

the articles which were failing in supply, and correspondingly a good harvest tended to diminish the price of those articles. This country was now experiencing the benefit of a good harvest, which had lowered the price of wheat and other articles with it; but he thought there was an inclination to over estimate the permanent effects of a good and a bad harvest, because it was not considered how very small the proportion of food thus affected bore to the whole consumption. Half of the wheat consumed in this country came from abroad; and it was quite clear that the difference of 10 per cent. in our harvest was only 5 per cent. of the whole consumption; therefore it could not exercise very much of a real or lasting influence. Then, as to the appreciation of the value of gold, he agreed with Mr. Giffen that there was an appreciation going on, but not to any such extent as would account for the difference in prices. There was a depreciation, no doubt, in the value of gold when a large quantity was discovered, and there was now a corresponding reaction because the cost of procuring it was more than it was in former years. He thought the present appreciation would continue, and no doubt it tended to a certain extent to account for the lowering of prices. But the fact of the great discoveries of gold increasing the quantity in existence, was not at all equal in importance to the fact that it came into the hands of comparatively few persons, who becoming possessed of a large amount of easily earned gold came into the market as large consumers, paid extravagant prices for the articles they wanted, and so suddenly raised the price of the goods they purchased. He differed with Mr. Giffen in believing that there was too little gold for the use of the world, because if all the means of obtaining it for use were looked at, it would be found that there was really more in proportion to the wants of the world than there ever had been at any previous time. Professor Jevons alluded to the multiplication of the cheque system. It was well-known that the large circulation of paper money in the United States had supplied the place of gold, and that credit had been extended more than it was previously: therefore less gold passed from hand to hand. The multiplication of banks throughout the country had prevented the holding of gold by individuals. Every petty shopkeeper had his bank account, and there was probably less required than ever there was before. There was another cause which had not been alluded to, namely, the rapid shortening of the time occupied in the transport of goods from abroad; consequently the goods were exchanged for money in a much shorter period, and there was less money required for carrying on the transactions. Notwithstanding the increase of population and the increase of trade, he thought there was really no more necessity for gold than there was many years ago. The present state of the money market showed that there was no scarcity, and he did not apprehend that the supply would fall short. No doubt, as far as the manufacturers were concerned, there were fewer possessed of gold to bring to the market. Mr. Giffen seemed to think that there had been no diminution at all in our foreign trade. He (Mr. Bourne) had just completed a calculation with regard to the export trade in 1872 and that of last year, and he found that

there had been a falling off in value to the extent of 42 per cent. between 1872 and 1878, of which one-fourth was due to the diminished quantity of goods exported, and three-fourths to the diminished price which had been received.* He thought this was a very serious matter indeed, and in it would be found a real solution of the falling of price. The present supply of imports had not fallen off, nor had their consumption diminished to any considerable extent, for the reason that the lowness of price had allowed the money to go farther, and enabled the purchasers to purchase an almost equal quantity. That could not go on for any continuous period, and he thought that the high prices which existed some five or six years back were the result of the plentifulness, of money not only arising from the abundance of gold which was imported from California and Australia some years ago, but from the plentifulness of our export trade. He thought that the foundation of our national prosperity arose from the quantity of goods we could manufacture and sell, and the price which could be obtained from them as enabling us to purchase from other nations and enjoy the fruits of such purchase. If the export trade of this country could be recovered, then he believed the power of importing and paying the price of those imports would also be recovered.

Mr. COURTNEY, M.P., thought it was by no means a bad compliment to Mr. Giffen that there was some little hesitation on the part of members in addressing themselves to the paper, because in it there was the fruit of a very great deal of solid thought and hard work, which it would take some time on the part of members to assimilate. Mr. Giffen had pointed out what they all recognised, namely, a considerable fall in the value of commodities, and he proceeded to discover what was the main cause of the fall. One cause he gave was that gold had appreciated or become relatively more valuable than it formerly was. There appeared, however, to be one difficulty at the outset in accepting that solution. Mr. Giffen admitted that the fall of prices was not an isolated phenomenon. It had happened again and again in several years, and Mr. Giffen had remarked that the last fall was relatively greater than the present fall. Now, if the same thing was found happening repeatedly at different period, he thought a logical error would be committed in fastening on something special and accidental as causing that fall, instead of finding something permanent and of a recurring nature which would explain the phenomena as often as they occurred. That seemed to him to be the preliminary difficulty in accepting Mr. Giffen's solution. With respect to the question whether the fall in prices was or was not

* The figures referred to, though not wholly quoted by Mr. Bourne, show that noting all the principal articles of British produce exported in the two years, the value was 138,000,000*l.* in 1878, and of the same articles in 1872 196,000,000*l.*, being 42 per cent. more in 1872 than 1878. Analysing the quantities and prices of each article, it appeared that the difference, 58,000,000*l.*, between these two amounts arose from there having been lesser quantities in the latter year to the extent of 13,000,000*l.*, and a loss of 45,000,000*l.* from the lower prices at which they had been valued.

beneficial and whether the rise in the price of gold was or was not injurious to the nation, no absolute opinion could be pronounced upon it. Until the special cause of the variation in the value of gold or prices was known, it could not be said whether it would or would not be beneficial to the community. Prior to the great discovery of gold in California and Australia there was no doubt a considerable tendency to a fall in prices, due to the fact which Mr. Fordham had stated, namely, the continued increase of the facility of production, and that fall was no doubt a benefit to the community. The rise in prices that followed the discovery of gold in Australia was again a benefit, because gold itself was a commodity which was used for other purposes than for exchange; and if the wants of the people were more easily satisfied with gold than before it was a benefit to them. Moreover, they, as a nation, apart from the whole human family, had derived special advantage from the gold discoveries in being the medium through which that great cheapening of gold had been conducted to the rest of the world. If now the fall of prices was to be traced, as Mr. Giffen seemed to trace it, to the increased difficulty of finding gold, then he should look to that fall in prices as a distinct evil in precisely the same way as he found the increase of gold was a benefit. We were now passing through the phenomena, and without repudiating it altogether, he demurred to Mr. Giffen's explanation. In spite of his (Mr. Giffen's) depreciatory remarks, *il.* notes might be again introduced into England. Mr. Bourne had said that the fall in prices was due to the diminished exports. But what caused the falling exports? They could not get to the cause if it were only said that there had been such a falling off; some more real and permanent cause should be found. The particular fall in prices under discussion undoubtedly began in 1873 in consequence of the great commercial crisis in America. He did not think that crisis could be traced to the fact that gold was becoming more and more difficult of discovery. The depression in trade began by the profligate expenditure of capital upon perfectly worthless undertakings in the hope that it would prove remunerative, which it did not. The basis of economical life had thereby been diminished. Of course that communicated itself at once to this country, which had been suffering from that cause ever since. We were now slightly recovering from it, and in America there were distinct signs of recovery. Professor Jevons would of course refer this to the sun spots, and he might get farther back in the cycle of causes by that discovery. He (Mr. Courtney) was not expressing any opinion at present for or against that cause, although several things might be said about it; but if it was the case that in a greater or less number of sun spots the secret of the sanguine character of commercial men in recurrent cycles of ten years could be discovered, then he thought it was a very valuable discovery.

Mr. WALFORD called attention to one point incidentally arising out of the paper, namely, what would have happened in the present commercial depression throughout the country but for the free trade policy, which had kept the price of the necessaries of life

down to the lowest possible point, thus saving the country from disaster, and tiding it over one of the most momentous periods that had occurred in our time.

Captain CRAIGIE said that it could not be too clearly understood that the various bad harvests had a much larger share in producing the state of depression under discussion than was sometimes allowed. The last harvest had been greatly over-rated, and the long continuance of trade difficulties might be in part attributed to a fourth bad harvest, and a prolonged failure of the largest interest in the country to realise wonted profits. He called attention to the reduction also in live stock, though that now was almost the only hope for agricultural success. By establishing a greater breadth of pasturage there would by no means of necessity follow a greater meat production in the country. This matter was usually overlooked or misrepresented, for the popular impression tended in just the opposite direction. The distinct and steady decrease in the live stock of the country might no doubt be accounted for by the prevalence of imported diseases of late years, but attention should be given to the circumstance that concurrently with more land being laid out for grazing, the cattle and sheep stock of England were diminishing in numbers. With regard to the use of gold, he thought that much more paper was being used in the country than was relatively the case some years ago. He could hardly therefore imagine we were approaching anything like a famine or scarcity of gold for use as coin.

Mr. BRIGGS having made a few remarks,

Mr. HEPPLE HALL said he thought that Mr. Courtney struck the keynote of the situation when he alluded to the unsurpassed folly that brought about such a state of things in 1873 in America, and from which this country was suffering to a considerable extent now. He happened to be in America in that year, and could testify to the condition of things which the terrible mania for laying out money brought about there. He had listened with the greatest attention to what Mr. Giffen had said; but he thought with Mr. Bourne and other speakers that exceptional causes could hardly be looked to as operating to bring about such a state of things as existed in this country at the present time. No doubt the discredit which generally prevailed was brought about by fraud, over-trading, and over-speculation, and was probably one of the greatest causes; but he thought it was more owing to what Mr. Courtney had alluded, namely, speculation abroad, or the sending out money for investment abroad which was required for the carrying on of our own commerce. It was well known what a condition of trade was brought about by an over-inflated currency, such as existed in the United States after the war. He had found in Richmond, Virginia, at the close of the war, a whole barrow-load of greenbacks necessary to buy a breakfast. With inflation of currencies there was an inflation of price, and with the reduction of the quantity of money, there was a reduction in prices, and that ought to be taken

into account in estimating the difficulties through which this country was now passing. He considered the other conditions as normal, and thought that a fair and easy return might be looked for in trade when these conditions of finance were removed and a more healthy state of things existed.

The PRESIDENT, in moving a vote of thanks to Mr. Giffen, said the paper was an extremely able and interesting one. He was disposed to agree with Mr. Courtney that most people would hesitate to make any remarks upon it without making more careful investigation than was possible on hearing it read for the first time. There was one point which Mr. Giffen had made clear beyond all doubt. He had shown that the prices of all articles of trade had decreased in value since 1873 to the present time to the average of 22 per cent., and he had shown that this fully accounted for the whole difference in the value of our exportations. Mr. Bourne differed somewhat in his figures, and said that the reduction in the total value of our exportations since 1873 was 44 per cent., and of that three-fourths was due to value and one-fourth to quantity. Even on Mr. Bourne's showing, therefore, the reduction of our importations during the last six or seven years had been only 10 per cent., instead of 40 per cent., as would appear from the values. There was a difference between the statement of Mr. Bourne and that of Mr. Giffen; but inasmuch as Mr. Giffen had given the actual figures which showed the reduction of the value of our exportations to be 22 per cent. and not 40 per cent., he was disposed to give his verdict on this question of fact in favour of Mr. Giffen. It may, therefore, be taken as a fact that the reduction in the value of the exportations in this country was due to prices and not to quantities, and he thought it would be found, by examination of the trade of other countries that their export trade had been reduced in the same proportion; in other words, that the free interchange with other countries had been reduced not in quantities, but in values. This showed that although the trade had been an unprofitable one, the export trade of the country remained in quantity as it was; and he thought that was a fact which would dissipate a good deal of the alarm created in reference to the decay of our manufactures. He did not understand that Mr. Giffen attributed the fall of 22 per cent. in prices wholly to the depreciation of gold; but that he allowed a very large proportion of it was due to those causes which Mr. Courtney had pointed out, and to which Mr. Giffen alluded in his paper, namely, to the great disturbance in trade caused by the immense inflation in America, and to a variety of other economic causes, wholly independent of the depreciation of gold. He also understood Mr. Giffen to say that the fall in price might be in part due to the temporary depression of gold, to the demand for gold in Germany in consequence of its being there adopted as a standard for value, and also to the resumption of the gold specie in America. But over and above this, Mr. Giffen thought that the reduction in price was also partly due to the permanent depreciation in gold, and he deduced this fact from a comparison he

made with the years 1865 and 1869, showing that although there had been a very great reduction in prices from the year 1873 to the present year, there was a still greater reduction from 1865 to 1869, but that the reduction on that occasion was from a higher point in 1865 than it reached in 1873, and not to so low a point in 1869 as was reached in 1878. These were the important facts upon which Mr. Giffen based his theory, that there had been a general appreciation in the value of gold. Although he had listened carefully to these arguments, he was rather disposed to agree with Mr. Courtney that the induction was not sufficient to establish generally the fact of an appreciation of gold. It appeared to him that a much wider induction must be looked for than a simple comparison between the prices of the years 1865 and 1873, and the prices of 1869 and the present time. It might be that there had been an appreciation of gold in the interval; but at the present time the induction was not complete: therefore at present he was disposed to withhold his opinion on that point. Whether in the event of the appreciation of gold such a fact would be to the detriment to the interests and to the trade of this country generally, was a difficult matter on which to come to any conclusion. It must not be forgotten that the rest of the world were debtors to this country, and their debts were generally due in gold, and if there was an appreciation of value in gold it would to that extent be to the benefit of this country. On the other hand, no doubt the appreciation of gold to a serious amount would cause a general disturbance in the arrangements of trade, in wages, and other matters, and would cause a difficulty in the adjustment of prices, but he saw no reason to doubt that after adjustment had been made trade would not go on much as before. Mr. Giffen had pointed out facts which showed the desirability of this question of the appreciation of gold being more closely looked into. A proposal had been made by eminent persons, that a gold standard should be adopted for India, and he thought with Mr. Giffen that it certainly would not be wise to do this if there was any reason to suppose that gold had been appreciated rather than that silver had been depreciated. There were other measures pointed out by Mr. Giffen which possibly might be adopted on the supposition that an appreciation of gold had taken place; but it was not necessary to enter into them, because they would introduce questions of another character, namely, whether *il.* notes should be introduced. He would suggest whether there should not be increased facilities for small payments by cheques by doing away with the penny stamps on cheques of small amounts. It would be possible to economise still further the circulation of this country by some such steps as these; but before adopting them, for the reasons stated by Mr. Giffen, it would be desirable to found them on the fact that there had been a real appreciation of the value of gold. He was not at present fully convinced that this had been the case; but even although he might hold that view, he was quite sure they would all agree in according a vote of thanks to Mr. Giffen for his most able and interesting paper.

Mr. GIFFEN in reply, thanked the meeting for the very favourable reception that had been given to his paper. With reference to the supposition that he had attributed the greater part of the fall in prices to the permanent appreciation of gold, he might state in fairness to himself that he very much wished to avoid giving that idea. He had laid the greatest stress upon the other causes, such as discredit, bad harvests and the temporary demands for gold, and he had done very little more than indicate the leaning of opinion, that there had been an appreciation of gold which might be of a more permanent character. He laid greater stress on the fact that if there had been no appreciation of a permanent kind which could be traced to the late fall of prices, still the tendency seemed to be in that direction. There had been a diminishing supply of gold for the last twenty years, and if this continued, with the wants of the world continually increasing, it was almost inevitable, that a time might come very soon when there would be an appreciation which we did not have now. Mr. Jevons had, perhaps, touched the most critical part of the paper, namely, the question how far the current requirements of the world had increased since the 1848 period. As it stood, it seemed to be very much a matter of opinion, but he did not think that anyone had indicated that the use of cheques had increased to such a material extent as to affect the use of gold. He should say that the use of cheques coming in so largely had very much affected the use of notes; but he did not think it had affected the use of gold so much as had been suggested. If cheques came in to take the place of note circulation, there would not be a proportionate diminution of gold in consequence, because the banks ought to keep much larger reserves, and he was not sure, if such reserves were properly kept, but that there would be a still further fall in prices.

NOTE BY Mr. GIFFEN.—With reference to Mr. Bourne's statement (p. 73) that a comparison he had made of the principal exports in 1872 and 1878 appeared to indicate a fall in quantities as well as values, and to the President's remarks on it (p. 76), it may save misconstruction to point out that this statement does not affect my comparison between 1873 and 1877, which is for different years, and comprises not only the principal exports, but all the articles of export whose quantities and values are separately stated in the "Statistical Abstract." There are reasons which make 1873 a better representative year for our maximum trade than 1872, and I hope to continue the comparison for 1878 when I have the requisite figures. I have not seen Mr. Bourne's calculations, and must not be understood, therefore, as admitting them to give a fair account of the whole export trade of 1872 and 1878.

The FAMINES of the WORLD: PAST and PRESENT—PART II. By
CORNELIUS WALFORD, F.I.A., F.S.S., Barrister-at-Law, and
Fellow of the Royal Historical Society, &c., &c.

[Read before the Statistical Society, 18th February, 1879.]

CONTENTS :

	PAGE		PAGE
Artificial Causes of Famines enumerated	79	Speculation (Forestalling, &c.)	197
War ..	79	Misapplication of Grain	211
Defective Agriculture	80	General Remarks on the Tables	217
Defective Transport	82	The Prevention of Famines	220
Legislative Interference	92	The Mortality from Famines	222
Currency Restrictions.....	163	Price of Wheat from A.D. 1000	226
		Literature of Famines.....	246

IN the first portion of my paper I considered the five “natural causes” of famines, viz.:—RAIN (producing floods); (2) FROST; (3) DROUGHT; (4) OTHER METEOROLOGICAL PHENOMENA; and (5) PLAGUES OF INSECTS AND VERMIN; leaving the remaining seven causes, viz. (6) WAR; (7) DEFECTIVE AGRICULTURE; (8) DEFECTIVE TRANSPORT; (9) LEGISLATIVE INTERFERENCE; (10) CURRENCY RESTRICTIONS; (11) SPECULATION (viz., “Ingrossing” and “Fore-stalling”); (12) MISAPPLICATION OF GRAIN (as in brewing, distilling, &c.), which I designated the “artificial causes” of famines, to be considered on the present occasion. I now proceed to this task; and shall deal with the several sections in the order above enumerated. It will be seen that in treating of these artificial causes, the range of observation will be more limited, being almost exclusively confined to the United Kingdom.

VI.—*War.*

That war has been in the past, and probably ever will (while it shall exist) be productive of famines, seems to be a self-evident proposition. Not only does it draw from their employments those who would be engaged in the cultivation of the soil; but it withholds the labour necessary to gather in the crops already produced; while by devastating the plains, as also in its endeavours to starve out the enemy, it wastes and destroys at every step that which has been already garnered in. At sea it blockades and diverts cargoes from their destinations; on land it cuts off armies, cities, districts, from their supplies. Still further, war breeds pestilence; pestilence cuts down the population who have escaped

from its ravages; the land lies uncultivated; the live stock dies; and desolation proclaims itself. Hence the sword, pestilence, and famine are now, as they have been in all time, the three associated deadly enemies of the human race.

These truths need no selected examples for their illustration, they are too patent to all; but in the margin of Table XIV I have indicated periods of peace and war, as exercising a never-failing influence on the price of grain, to which I shall call more minute attention in my observations upon that table.

But there is another manner in which war has deeply affected the food supplies of the people in this country, and this is by reason of the fiscal burdens which it has thrown upon our country, and which have been defrayed, and could only be defrayed, by taxing continuously the necessities of life required by the entire population. The progress of these burdens, as affecting grain, will be reviewed in Table X.

VII.—*Defective Agriculture.*

That defective agriculture, associated with an increasing population, must conduce greatly to the probability of famines at recurring periods, is also a truth which requires no detailed elucidation. The fact that agriculture in England was very defective for at least a period of one thousand years after the Roman occupation (which brings us down to the middle of the sixteenth century); is a readily admitted truth. I mention the Roman occupation, because it is asserted, on what may be deemed good authority, that during that interesting period, grain was actually exported regularly from this island to support the imperial legions during their wars of conquest in other parts of Europe. Several famines in England are recorded during the Roman occupation (B.C. 55 to A.D. 449), but they become much more general during the Saxon period (A.D. 449 to 827); and still more so under the Anglo-Saxons and Danes (A.D. 827 to 1066). It was perhaps under the Normans (A.D. 1066 to 1154) that the agriculture of England fell to its lowest ebb. During the century of Norman rule, famines in England were almost chronic. Rents, too, were paid in kind, and not in money.

It is but too obvious that the continuous warfare which prevailed during the several periods last named must be incompatible with progressive agriculture. Not only was the face of the country devastated by the civil strife which prevailed at home, but the armies raised for our endless foreign wars carried off the very flower of our yeomanry, and gave a martial rather than an agrarian tendency to the times. Under the House of Plantagenet (A.D. 1154 to 1399) matters were not much mended, except

perhaps during the single reign of Edward I. The Houses of Lancaster and York, which reigned during the next century (1399-1485), bring up to the mind only memories of civil wars and extended desolation. Under the government of the House of Tudor (1485-1603) we begin to recognise the approach of a better state of matters; and this continued under the Stuarts, and through the Commonwealth and the Restoration.

At the Revolution of 1688 more than half the kingdom was believed to consist of moorland, forest, and fen; and vast common wastes covered the greater part of England north of the Humber. The numerous Enclosure Bills which begin with George II (1727) indicate that land was now growing into demand for the purposes of cultivation. This feature yet more especially marked the reign of his successor (George III). The drainage of the fen districts of England commenced about the middle of the last century; and by these means, combined with the other influences then at work in the same direction, the whole face of the country became changed. Ten thousand square miles of previously untilled land were added to the area of cultivation by the Enclosure Acts alone; so that between the first and the last years of the eighteenth century a fourth part of England was redeemed from waste and brought under cultivation. But this is not all: the improvement of tillage had during the same period probably doubled the products of the land cultivated. This improvement in practical agriculture began with the travels and treatises of Arthur Young (the Suffolk farmer). It was followed up by the introduction of the large farm system of Mr. Coke, of Norfolk, rendering high farming a necessity. This again was succeeded by the development of scientific agriculture, in the early half of the present century, in the villages of Lothian; while he who has done more than any other man living to bring all these past teachings down to practical every-day adoption, is the enthusiastic John Joseph Mechi, of Tiptree Hall, the model Essex agriculturist!*

Mr. Arthur Young, in his "Survey of the Eastern Counties of England," vol. iv, page 458 (published 1771), estimated the extent of land under crop in England (exclusive of Wales) at 12,707,000 acres; but this was believed to be much too high. Mr. Stevenson, whose opinion was regarded as of high value, estimated the land under culture in England in 1812 as being 12,000,000 acres. Mr. Couling, land surveyor, laid before the Parliamentary Committee on Emigration in 1827, tables (since regarded as of high authority) wherein he estimated the arable and pasture land of England and Wales, exclusive of wastes,

* In Table XIV will be found many detailed facts bearing upon and illustrating points associated with the periods embraced in this brief summary.

forests, roads, rivers, &c., at 28,749,000 acres;* of which he supposed the cultivated land and gardens to make 11,143,370 acres. Mr. Middleton, Mr. Comber, and Mr. Stevenson (already referred to) regarded this latter estimate as being as much too low as Mr. Young's had been too high. Mr. M'Culloch ("British Empire," 1854, vol. i, page 548), supports this last view, and estimated the land under cultivation in 1846, at from 13 to 13½ millions of acres, cropped as follows:—

	Aces.		Aces.
Wheat	3,800,000	Beans and Peas	500,000
Barley	1,500,000	Clover	1,300,000
Oats and Rye	2,500,000	Fallow	1,500,000
Potatoes, Turnips, and }	2,000,000	Hops	50,000
Rape		Gardens.....	150,000

Tables prepared by Mr. Stevenson, from the returns made to the Board of Agriculture, estimated the average produce of wheat in England in 1812-13, at from 20 to 24 bushels ($2\frac{1}{2}$ to 3 quarters) per acre; barley at 32 bushels, and oats at 36 bushels per acre. Mr. M'Culloch considered that little dependence could be put on these estimates, and he considered that even if they were correct when made, the produce of wheat had been so much increased by improved agriculture, as to be not less (in 1846) than 32 bushels per acre, a difference of yield on the 3,800,000 acres of no less than 30,400,000 bushels! The cultivated land in *Scotland* was estimated by Mr. M'Culloch as being 5,043,450 acres, out of a total surface acreage (exclusive of lakes) of 19 millions of acres. In *Ireland* the cultivated land (including towns and plantations) was estimated at 13,881,711 acres, out of a total of 20,177,446 acres.

VIII.—*Defective Transport.*

I said in the first portion of my paper, while speaking of India, that taking the empire as a whole, there was always (that is to say every year) enough food produced for the support of all its inhabitants, vast as that population is. If this be so of any one portion of the globe, it will certainly be true of the globe taken as a whole. It has often happened in our own little island, that while grain and other articles of food have been at famine prices on one side, or one end, or in one division, there has been an abundance and to spare in other portions of the land; how much more likely then is this state of matters to occur in vast continents such as India? This being duly considered, it is seen at once that one of the great problems in connection with famine is, *facilities for transport.*

* The entire acreage of England is now returned as 32,590,429 acres, and of Wales 4,734,486 acres, total for England and Wales 37,324,915 acres.

As between nations there has existed from all time of which history takes note, the means of communication and of transport, by ships, *i.e.*, sailing vessels. The countries of the earth have indeed too often made laws shutting out the supplies brought to them in the vessels of other nations; or only admitting them under exceptional and stringent conditions. As to the three divisions of our own kingdom it has rarely happened that famine has prevailed during any one year in them all; but each had so contrived, by legislation (presently to be reviewed) to shut out the products of the others, that starvation ensued before the artificial barriers so foolishly set up could be removed; and only when removed to be set up again the moment the temporary occasion had passed away.

So as to the continent of Europe: we have always been within reach of supplies from thence, but from the obstructions of legislation, the circumstance of war, or the depreciation of our currency, these have not been always available.

But while we thus cut ourselves off from supplies from without, did we take measures to facilitate the transport of the produce of our internal resources? It is clear that we did not. The condition of our internal communications until about the middle of the last century was such as can only be realised by detailed descriptions, drawn from contemporary sources. Even the great highways made for us during the Roman occupation—these Romans probably had learned the value of such roads from the famine visitations to which their own capital had been so often subjected—had been allowed to fall into a hopeless condition from sheer neglect.

It is seen from all this, that even in a small country like our own the means of internal communication are of the first consequence in periods of partial or general scarcity; how much more so must they be in vast and thickly populated continents like those of Asia or Africa? The grain may be transported from any part or from all parts of the globe to the ports; and the people may die of hunger long before it can reach them in the interior! this has happened so lately as to add a terrible emphasis to the facts here stated.*

I shall offer some observations later especially applicable to India; therefore I now propose to confine myself to the past experience of England in regard to transport; hoping that the lessons to be learned from these examples may be applied with effect elsewhere.

* As an important adjunct to the present increased facilities of transport must be mentioned the *Electric telegraph*, by means of which these facilities may be put promptly into motion.

TABLE VIII.—*Defective Transport.*

B.C. 55 to A.D. 449 1247	<p>The first roads, properly so-called, made in this country, was during the Roman occupation; but unfortunately these were not kept up.*</p> <p>Sir Charles Whitworth reviewing the price of grain, as increased from 1244, says, "so great a variation within so short time, in the same kingdom, indicates bad husbandry, and a want of proper conveyances both by land and water."</p>
'85	<p>The first enactment relating to highways was 13 Edward I (<i>The Statute of Winchester</i>). "The highways to market towns shall be enlarged," which is not very clear in its meaning.</p> <p>"And further, it is commanded that highways leading from one market town to another shall be enlarged, whereas woods, hedges, or dykes be, so that there be neither dyke, underwood, nor bush whereby a man may lurk to do hurt, near to the way, within 200 foot of the one side, and 200 foot on the other side of the way, so that this statute shall not extend unto oaks, nor unto great trees, so as to be clear underneath. And if by default of the lord that will not abate the dyke, underwood or bushes, in the manner aforesaid, any robberies be done therein, the lord shall be answerable for the felony; and if murder be done, the lord shall make a fine at the king's pleasure. And if the lord be not able to fell the underwoods, the country shall aid him therein. And the king willeth, that in his demense lands and woods within his forest and without, the ways shall be enlarged as before is said. And if percase a park be near to the highway, it is requisite that the lord shall minish his park, so that there be a boarder of 200 foot near the highway, as before is said, or that he make such a wall, dyke or hedge, that offenders may not pass in return to do evil."</p> <p>This was not a widening of "highways" such as now understood, it was merely clearing the sides of highways, much as the sides of railways were cleared during the last rising in Poland. (<i>See</i> 1691.)</p>
1532-33	<p>By 24 Henry VIII, cap. 2—"An Acte for paving the highwaye betweene the Stronde Crosse and Charyng Crosse—" it is recited:—</p> <p>"In moost humble wise shewe and besече your highnes, your poore subjects, the inhabitauntes dwelling in the parisshe of Seynt Martine in the fielede next Charing Crosse, our lady at Stronde, and Seynt Clement Danes without Temple Barre of London, in your countie of Middlesex: that where the comon highway betweene Charinge Cross aforesaid, and the Strond Crosse is very noyous and fowle, and in many places thereof very jeoperdous to all your liege</p>

* "The great Roman highways did not exceed 15 feet in breadth, and were sometimes a foot or two less [12 feet]. In constructing them, the earth was excavated till a solid foundation was obtained, or, in swampy places, a foundation was obtained by driving piles. Over this, which was called the *gremium*, four courses or strata were laid, namely the *statumen*, the *rudus*, the *nucleus*, and the *pavimentum*. The *statumen*, which rested on the *gremium*, consisted of loose stones of a moderate size. The *rudus* or rubble-work over this, about 9 inches thick, was composed of broken stones, cemented with lime. The *nucleus*, half-a-foot thick, was made with pottery broken into small pieces, and also cemented with lime. Over all was the *pavimentum*, or pavement, consisting of large polygonal blocks of hard stone . . . nicely fitted together, so as to present a smooth surface. The road was somewhat elevated in the centre, to allow the water to run off, and on each side were raised footpaths covered with gravel. At certain intervals were blocks of stone to enable a horseman to mount."

Roads so constructed are of such extraordinary durability, that portions of some more than 1,000 years old are still in a high state of preservation.—DYER'S *Rome* (1865), p. 92. But in Britain the Roman roads were either intentionally destroyed or allowed speedily to get out of repair.

TABLE VIII.—*Defective Transport—Contd.*

A.D.

1532-33

people that wayes passing and repassing, aswell on horsebacke as on foote bothe wynter and in somer, by nyght and by day. The verry occasion whereof hath ben and yet is that the landholders and owners of all the landes and tenents next adjoining on both sides of the seid common highway be and have been remisse and negligent, and also refuse and will not make and support the said highway with pavyng, every of them after the porcion of his grounde adjoining to the same high waies: and forasmoeche mooste gracious seuveraigne lord as the said highway is and hath ben of contynuaunce greatly occupied aswell with your subjectes and with their cartes and cariages reparinge to and from your citie of London, frome dyvers parties of this your realme, as with your subjects passing and repassing to and from the towne of Westminster, aboute the nedes of your lawes ther kepte in the term season, which waye if it were sufficiently paved and made after the maner of the pavement of the strete betweene the said Stronde and Temple Barre it should not only then be a greate comforte to all your subjects thereabouts dwelling, but also to all your other liege people that wayes passing and repassing."

It was then enacted that the owners of lands adjoining the said highway should pave the same, and keep the same paved. Justices at Michaelmas term each year to inquire into default.

'33-34

In the following year there was an "Acte for pavyng Holbourne," which recited that the street was the common passage for all "caryages caryed from west and nor-west parties of the realme," and that "the waye is soo noyous and soo full of sloughs and other incumbrances that often tymes many of your subjects rydyng through the said strette and way be in joperdie of hurte, and have almost perysshed;" but here the road had before this time been a reasonably good one.

'55

There was enacted 2 and 3 Philip and Mary, cap. 8—"An Act for the mending of highways"—which recited, "Being now both very noisom and tedious to travel in, and dangerous to all passengers and carriages;" and then enacted "that every parish within the realm should, upon the Tuesday or Wednesday in Easter week, appoint two surveyors or orderers for one year, of the works for the amendment of the highways, in their parish leading to any market town." "And the said constables and churchwardens shall then also name and appoint four days for the mending of the said ways, before the feast of the Nativity of St. John the Baptist then next following, and shall openly in the church the next Sunday after Easter, give knowledge of the same four days; and upon the said days the parishioners shall endeavor themselves to the amending of the said ways," that is to say certain some of the parishioners occupying land and owning horses, and also housekeepers, were to supply horses, carts, and labour during these days, under the directions of the said surveyor. (See 1562 and 1587.)

'62

By 5 Elizabeth cap. 13, the Act of 1555 was continued, and authority was given to take material for mending the roads from any land convenient, so that the opening made for this purpose be not more than 10 yards over at the most; the same to be filled up again within one month; and it was recited:—

"5. And forasmuch as the highways in sundry places of this realm be full of continual springs and water-courses, by continued increase and sinking thereof into the ground, the side ways are not only very deep and dangerous, but also for the most part impossible to be amended and repaired in any good and sufficient manner without some further remedy provided for the same."

Power was therefore given to turn water-courses into ditches adjoining highways. (See 1576.)

TABLE VIII.—*Defective Transport—Contd.*

A.D.	
1564	On the authority of Stow, this is the year when coaches were first introduced, thus :— <p>“In the year 1564, Guiliam Boonen, a Dutchman, became the queen’s coachman, and was the first that brought the use of coaches into England. After awhile, divers great ladies, with as great jealousy of the queen’s displeasure, made their coaches, and rid up and down the countries in them, to the great admiration of all the beholders ; but then by little and little they grew usual among the nobility and others of sort, and within twenty years became a great trade of coachmaking.”</p> <p>Haydn says coaches were first introduced into England in 1553 [it is recorded that Charles of Anjou’s Queen entered <i>Naples</i> in a carètta about 1282], while another author asserts that a Bill was brought into Parliament in 1601 [reign of Elizabeth], to prevent the effeminacy of men riding in coaches ; and that it was repealed in 1625. We do not trace either of these measures.</p> <p>Stow also says that at this date long waggons travelled on some of the high roads in the south of England. (<i>See</i> 1605.)</p>
’76	By 18 Elizabeth, cap. 10, “An Act of addition unto the former Acts for amending and repairing of highways.” This Act gives the following account of the condition of a road in the Isle of Sheppy, in the county of Kent, then much in use :— <p>“And forasmuch as the usual highway leading from the market town called <i>Middleton</i>, to the said ferry, is presently in such decay, that neither man nor beast without great danger is able to pass, whatever necessity should suddenly happen for men to repair into or out of this said isle, and the parish where the same lieth is not able to repair the same.”</p>
	It was therefore enacted that the inhabitants be taxed for the repair of the same.
’77	The Rev. William Harrison, who wrote an historical description of the Island of Britain, prefixed to <i>Holingshed’s Chronicle</i> , published at this date—being in many things, a shrewd observer, “thought it would be good if it were enacted that <i>each one should keep his next market with his grain, and not to run 6, 8, 10, 14, or 20 miles from home to sell his corn, where he doth find the highest price.</i> ” Such were the notions of this period.
’87	By 29 Elizabeth, cap. 5, the Act of 1555 was continued, “all which Acts above mentioned [including <i>inter alia</i> this] are by proof and experience tried and found to be very necessary and profitable for the commonwealth of the realm.”
1003	The queen died at 2 o’clock in the morning of Thursday, 24th March, and James was proclaimed king in London the same morning. But the news did not reach the city of York until Sunday, 27th March. <i>Continuation of Stow’s Annals.</i>
’05	Long waggons for passengers and commodities travelled from London to Canterbury and other large towns.—Stow.
’09	At this time the communication between the north of England and the universities was kept up by carriers, who pursued their tedious but uniform route <i>with</i> whole trains of pack horses. To their care were consigned not only the packages but frequently the persons of young scholars. It was through their medium also that epistolary correspondence was managed ; and as they always visited London, a letter could scarcely be exchanged between Yorkshire and Oxford in less time than a month.— <i>Vide The Historian of Craven.</i>
’24	<i>Navigable rivers.</i> —The Thames was made navigable to <i>Oxford</i> . This is the first noticeable step in inland navigation in Great Britain. We have to wait another century and a quarter for the introduction of <i>canals</i> , which completed the means of water communication through the interior of the country. (<i>See</i> 1759.)

TABLE VIII.—*Defective Transport—Contd.*

A.D. 1635 ...	In view of facilitating communication, Charles I resolved this year upon the establishment of the home post office. He says in his proclamation, that there has been no certain communication between England and Scotland; and he therefore commands a running post to be established between <i>London</i> and <i>Edinburgh</i> , to go thither, and come back again in six days; and for other roads there was promised the same advantages.
'59 ...	From the diary of Sir William Dugdale, it appears that he this year set forward to London in the Coventry coach on the 2nd May, and arrived on the 4th May, three days.
'60 ...	The General Post Office was established by Act of Parliament, and all letters were to be sent through this office, "except such letters as shall be sent by coaches, common known carriers of goods by carts, waggons, and pack-horses respectively." The Postmaster-General and his deputies, under this statute, and no other persons, "shall provide and prepare houses and furniture, to let to hire unto all through posts and persons riding in post, by commission or without, to and from all and every the places of England, Scotland, and Ireland, <i>where any post roads are.</i> " The postmaster was to furnish a guide with a horn to such as ride post.
'62 ...	The 14 Charles II, cap. 6—"An Act for enlarging and repairing of common highways"—which recites, "whereas the former lawes and statutes for the mending and repairing of the common and publick highways of this realm have not been found so effectual as is desired, by means whereof, and the extraordinary burthen carried upon waggons and other carriages, diverse of the said highways are become very dangerous and almost impassable." It then proceeds to apply remedies, much on the same lines as the former Acts. It contained the following:— "VIII. And be it further enacted by the authority aforesaid, that from and after the 29th September which shall be in the yeare of our Lord 1662, no travelling waggon, wayn, cart, or carriage wherein any burthen, goods or wares are or shall be carried or drawn for hire (other than such carts and carriages as are employed in and about husbandry and manuring of lands, and in the carrying of hay, straw, corne unthreshed, coal, chalk, timber for shipping, materials for building, stones of all sorts, ammunition or artillery, as shall be for His Majesty's service) shall att any one time travel, be drawn, or go in any common or public highway or road with above seven horse beasts, whereof six shall draw in pairs, and not with above eight oxen or six oxen and two-horse beasts, nor shall at any time carry above 20 hundredweight between the 1st day of October, and 7th May, nor above 30 hundredweight between the 1st May, and the 1st October (except such particulars as aforesaid), nor above 5 quarters of wheat, meal, mesline, rye, pease, beans, and tares, nor above 8 quarters of barley, malt, or oats, and after that proportion; nor shall any waggon, wayne, cart or carriage for the uses aforesaid be employed, the wheels whereof are lesse in breadth than 4 inches of the tyre." Upon penalty of 40s. Then follow powers of rating for repair of highways, &c. Owners of ironworks, and persons within the wilds of Surrey, Sussex, and Kent were not to be exempted from the operations of this Act. (<i>See</i> 1741.)
'63 ...	<i>Turnpikes.</i> —These were first set up this year; and this indicates a new era in the matter of improved highroads. Tolls had been previously levied by lords of manors, as one penny for every waggon that passed through; but this does not appear to have implied any obligation to keep up a road; probably its only justification was that some trespass was committed. The innovation, although based on reason, was long unpopular, and turnpike roads did not become at all general until after the peace of Paris in 1763.

TABLE VIII.—*Defective Transport—Contd.*

A.D.	
1663	Mr. Edward Parker, writing to his father, who lived near Preston, says, "I got to London on Saturday last. My journey was no ways pleasant, being forced to ride in the boot all the way. The company that came up with me were persons of quality, as knights and ladies. My journey's expense was 30s. This travel hath so indisposed me, that I am resolved never to ride up again in the coach."— <i>Archæologia</i> xx.
'67	Antony à Wood records in his diary that this year he travelled from Oxford to London in the coach, and was two days accomplishing the journey.
'70	By 22 Charles II, cap. 12—"An additional Act for the better repairing of highways and bridges"—which recited, "for the better repairing and amending of the highways, now generally spoiled by the extraordinary and unreasonable loading of waggons, and other carriages, and the neglect of repairing and preserving the same," the several Acts in force relating to highways were to be carried into execution. The clause in the Act of 1662, as to the width of wheels was repealed. Travelling waggons, wains, &c., carrying goods were to be drawn with but five horses at length. It also recites:— "XIII. And whereas in the counties of <i>Chester</i> and <i>Lancaster</i> there are many and sundry great and deep rivers; which run across and through the common and publick highways and roads within the said counties, which many times cannot be passed over without hazard and loss of the lives and goods of the inhabitants and travellers within the said counties, for want of convenient post and sufficient bridges in the said highways and roads, <i>to build and erect which there is no law now in force.</i> " It was then enacted that bridges were to be built in these counties within ten years. There were special provisions as to the <i>Usk</i> and <i>Bassolegg</i> bridges.
'73	It appears that the longest journeys which were made in England at this date were to Exeter, Chester, or York.
'82	The diary of a Yorkshire clergyman shows that in the winter of this year a journey from Nottingham to London in a stage-coach occupied four whole days. Quoted in <i>Archæologia</i> xx.
'91	The 3 William and Mary, cap. 12—"An Act for the better repairing and amending the highways, and for settling the rates of carriage of goods"—recites:— "Whereas the free and easy intercourse and means of conveying and carrying goods and merchandises from one market town to another, constitutes very much to the advancement of trade, increase of wealth, and raising the value of lands, as well to the ease and convenience of the subjects in general; for which ends divers good and necessary laws have been heretofore made for the enlarging, repairing, and amending the highways and common roads of this kingdom. Notwithstanding which laws, the same are not in many parts sufficiently amended and repaired, but remain almost impassable; all which is occasioned, not only by reason of some ambiguities in the said laws, but by want of a sufficient provision to compel the execution of the same." It was then enacted that all laws about highways were to be put in execution. Trees, bushes, and shrubs were to be pruned, so as not to hang over the highways. "XV. And be it enacted by the authority aforesaid, that the surveyors of the highways shall and are hereby required to make every cartway leading to any market town, <i>8 feet wide at the least</i> , and as near as may be even and level." Horse causeways not to be less than "3 feet in breadth."
'07 ...	By 8 and 9 William III, cap. 16—"An Act for enlarging common highways"—powers were given for carrying out the requirements of

TABLE VIII.—*Defective Transport—Contd.*

A.D.	
1697	the Act of 1691. Justices at quarter sessions should have powers for making highways 7 feet wide, and to order timber to be cut down for such purpose. Stones or posts were to be erected at cross roads, with name of next market town thereon.
1700	"Till the beginning of the eighteenth century, we were almost wholly an equestrian people."—KNIGHT'S <i>Once upon a Time</i> , p. 110.
'25	The stage coach journey from London to Exeter occupied four summer days. The passengers were aroused every morning at 2 o'clock, left their inns at 3, dined at 10 o'clock A.M., and finished their day's journey at 3 in the afternoon.— <i>Vide Mrs. Manley's Journey</i> .
'34	The 7 George II, cap. 9—"An Act to explain and make more effectual the laws in being, to oblige the possessors of lands adjacent to common highways to cut and keep low such hedges as are adjoining to the said highways"—recites:— "Whereas the making the common highways as commodious as may be, tends greatly to the ease and safety of his majesty's subjects, and to the advantages of trade and commerce; and whereas in many places the common highways are greatly damaged by the hedges adjoining thereto being of such height as to hinder thereby the advantages which would otherwise accrue to the said highways by sun and winds; and whereas some doubts have arisen, whether in such cases the laws in being have provided a sufficient remedy." Surveyors were therefore authorised to cut hedges within 3 feet of the bank on owner's refusal to do so. The Act was not to alter the laws with regard to timber trees growing in hedges, nor any law for amending the highways.
'39	Mr. Andrew Thompson, of Glasgow, with a friend, left that city to ride to London. There was no turnpike road until they came to Grantham, within 110 miles of the metropolis. Up to that point they travelled on a narrow causeway, with an unmade soft road on each side. As strings of pack-horses met them from time to time, they were obliged to plunge into the side road, and had often difficulty in scrambling up again upon the causeway.—CLELAND'S <i>Glasgow</i> . "There is no such conveyance as a waggon in this country (Scotland), and my finances were too weak to support the expense of hiring a horse. I determined therefore to set out with the carriers, who transport goods from one place to another on horseback; and this scheme I accordingly put in execution on the first day of November, 1739; sitting upon a pack-horse between two baskets, one of which contained my goods in a knapsack. But by the time we arrived at Newcastle-upon-Tyne, I was so fatigued with the tediousness of the carriage, and benumbed with the coldness of the weather, that I resolved to travel the rest of my journey on foot rather than proceed in such a disagreeable manner."—SMOLLETT'S <i>Roderick Random</i> .
'41	The 14 George II, cap. 42—"An Act for the preservation of the publick roads in that part of Great Britain called England"—recited that the highways of this kingdom were "greatly damaged and made ruinous by the excessive weights carried thereon." Weighing machines might be erected at tollgates, and carriages and goods might be weighed, a fine of 20s. a hundred for all above 6,000 lbs. weight, and applied to mending the roads. There were many exceptions to which this Act was not to apply.
'43	By 16 George II, cap. 29, carts were allowed to be drawn with four horses.
48	The Duke of Somerset, who died this year, was always compelled, by the badness of the cross-roads, to sleep at Guildford on his way from Petworth to London. A letter of one of the Duke's servants to another servant, announces his master's intention to arrive at

TABLE VIII. — *Defective Transport—Contd.*

A.D.	
1748 ...	Petworth from London, and adds directions that "the keepers and others who knew the holes and sloughs, must come to meet his grace, with lanterns and long poles, to help him on his way."
'50 ...	The only road to the houses of parliament at this date (reign of George II) was through King-street and Union-street, "which were in so miserable a state, that fagots were thrown into the ruts on the days on which the king went to parliament, to render the passage of the state coach more easy." Again, the present St. Margaret's Street was formed out of a thoroughfare known as St. Margaret's Lane, which was so narrow that "pales were obliged to be placed 4 feet high between the footpath and the coach-road, to preserve the passengers from injury, and from being covered with the mud which was splashed on all sides in abundance."—SMITH'S <i>Westminster</i> , pp. 261 and 262.
50-70	"This rapid growth of manufactures brought a corresponding improvement in the means of communication throughout the country. Up to this time these had been of the rudest sort. The roads were for the most part so wretched that all cheap and rapid transit was impossible, and the cotton bales of Manchester were carried to Liverpool or Bristol on pack-horses. <i>One of the great works of this period was the covering England with a network of splendid highways.</i> But roads alone could not meet the demands of the new commerce. The engineering genius of Brindley joined Manchester with its port of Liverpool in 1761 by a canal which crossed the Irwell on a lofty aqueduct, and the success of the experiment soon led to the universal introduction of water-carriage. Canals linked the Trent with the Mersey, the Thames with the Trent, the Forth with the Clyde."—GREEN'S <i>Short History of the English People</i> , p. 768.
'51 ...	By 24 George II, cap. 43—"An Act for the more effectual preservation of the turnpike roads in that part of Great Britain called England, &c."—it is recited:—
	"Whereas great sums of money have been expended in amending and repairing the turnpike roads of this kingdom, yet the said roads cannot be kept in sufficient repair, and are in many places become ruinous by the great and excessive weights which the number of horses now allowed by law to draw waggons and other carriages enable carriers and other persons using the said roads to carry upon the same."
	For remedy whereof certain stringent regulations were imposed; and there was a penalty for driving waggons out of turnpike roads to avoid tolls.
'56 ...	<i>Canals.</i> —Mr. Josiah Tucker, in the fourth edition of his "Essay on Trade," published this year, strongly advocated the cutting of canals between the great trading towns of the kingdom "for the conveniency and cheapness of carriage." He considers these much preferable to making rivers navigable. "They are kept and repaired at a much easier rate. They are not subject to inundations, or the shifting of the sand or gravel, and are generally much shorter and straighter. But what is above every other consideration, a boat laden with merchandise in a canal may be drawn by a single horse, on a full trot, as in Holland, up or down stream, whether there be flood or not; and requires but two men to guide it." A canal between Reading and Bath "would make an easy and cheap communication between the two principal cities of the kingdom, <i>London and Bristol.</i> Goods and passengers might be carried at one quarter of the present expense . . . if the like situation had been in France, a canal had been made long ago."
'59 ...	The Duke of Bridgewater's great canal was commenced. This was the practical commencement of canal navigation in Great Britain.

TABLE VIII.—*Defective Transport—Contd.*

A..D	
1759 ...	<i>France</i> had anticipated us by three parts of a century. The Caermarthenshire canal was opened in 1756, and the Droitwich canal the same year.
'63 ...	There was a coach once a month from Edinburgh to London, which was twelve to fourteen days on the road. Mr. M'Culloch says, "It was not till after the Peace of Paris in 1763, that turnpike roads began to be extended to all parts of the kingdom, and that the means of internal communication began, in consequence, to be signally improved."— <i>Account of the British Empire</i> .* Mr. G. R. Porter, in the <i>Companion to the British Almanack</i> (1837), writing of this same period, says:— "A gentleman now living at Horsham, in Sussex, has stated on the authority of a person whose father carried on the business of a butcher in that town, that in his time the only means of reaching London was either by going on foot or on horseback; the latter method not being practicable at all periods of the year, nor in every state of the weather; and that the roads were never at that time in such a condition as to admit sheep or cattle being driven upon them to the London markets: for which reason the farmers were prevented sending thither the produce of their lands, the immediate neighbourhood being in fact their only market. Under these circumstances the quarter of a fat ox was commonly sold for about 15s., and the price of mutton was 1½d. per pound."
'70 ...	In Arthur Young's <i>Tour in the North of England</i> , published this year, there is the following statement as to the condition of the turnpike road between Preston and Wigan:— "I know not in the whole range of language terms sufficiently expressive to describe this infernal road. To look over a map and perceive that it is a principal one, not only to some towns, but even whole counties, one would naturally conclude it to be at least decent; but let me most seriously caution all travellers who may accidentally propose to travel this terrible county to avoid it as they would the devil: for a thousand to one but they break their necks or their limbs by overthrows or breakings down. They will here meet with ruts which I actually measured 4 feet deep, and floating with mud only from a wet summer; what therefore must it be after a winter? The only mending it in places receives is the tumbling in some loose stones, which serve no other purpose but jolting a carriage in the most intolerable manner. These are not merely opinions, but facts, for I actually passed three carts broken down in these 18 miles of execrable memory."
'84 ...	Dr. Johnson—"the great Dr. Johnson"—was visited at this date by the Right Honourable William Windham, at Ashbourne (Derbyshire), where he had gone for the benefit of his health, and Mr. Windham made a note of various points in the conversation, amongst which is the following:— "Opinion about the effect of turnpike roads. Every place communicating with each other. Before there were cheap places and dear places. Now, all refuges are destroyed for elegant or genteel poverty. Disunion of families, by furnishing a market to each man's ability, and destroying the dependence of one man upon another."

* Mr. Porter in his *Progress of the Nation* states that when it was in contemplation to extend the turnpike roads from the metropolis to more distant points than those to which they had been before carried, the farmers in the metropolitan counties petitioned parliament against this plan, fearing lest their market being invaded by so many competitors, who would sell their produce more cheaply, they should be ruined!—Book II, section 3.

TABLE VIII.—*Defective Transport—Contd.*

A.D.	
1812	<i>Steamboats.</i> —The first steamboat—the <i>Comet</i> —sailed upon the Clyde, 18th January this year. This was the initiation of a world-wide system of rapid transit.
'30	<i>Railroads.</i> —The opening of the Liverpool and Manchester Railway on 15th September this year marks the practical commencement of the new era in locomotion in the United Kingdom. In a few years they made the country <i>one</i> in the matter of food supplies.
'34	There was a famine in <i>Mexico</i> this year, arising from drought and the consequent scarcity of maize. Mr. Bullock (<i>Across Mexico</i> , 1864-65) says, "The plain of El Bajío is emphatically the garden of Mexico, and might become the granary of the whole country <i>but for the absence of roads, which renders the transport of grain in large quantities an impossibility.</i> As it is, the great towns can only be supplied from their own immediate environs, which is a bad look out for the city of Mexico, surrounded as it is by unproductive marshes. In consequence of this lamentable state of things, which railway communication alone can remedy, <i>famine</i> may be raging in the capital, while the farmers of the Bajío— <i>less than 200 miles distant</i> —are at their wits' end to know how to dispose of their superabundant harvest."

Tramways.—These are regarded as modern appliances, but as early as 1602 tramways (with rails of wood) were constructed from some of the collieries round Newcastle-upon-Tyne down to the river. The first accurate description of these which we have met with is that given in the life of Lord Keeper North, published 1676.

"The manner of the carriage is by laying rails of timber from the colliery to the river, exactly straight and parallel, and bulky carts are made with four rollers fitting those rails, whereby the carriage is so easy that one horse will draw four or five chaldron of coals, and is an immense benefit to the coal merchants."

At Whitehaven as early as 1738 iron rails were substituted for those of wood. Here was the germ of our future railways. But these incipient projects did nothing to help forward the cause of internal locomotion, and it is a century later that we must look for their aid in this respect.

Tramways are only adapted to the thickly populated districts, and for purposes of transport of food products cannot compete with canals or railroads.

IX.—*Legislative Interference.*

Nothing was more natural in early times and under a monarchical form of government, than that arbitrary measures should be taken in view of lessening if not of averting calamities in regard to the food supply, although nothing was more certain than that in the end these would prove utterly fallacious. The first idea would be that as one section of the people required food products which another section had in superabundance, that the latter should *be made* to supply the former, and in so doing not to take any undue advantage of their necessities. This would lead up to the dogma of fixed prices for various articles of ordinary requirement; in the expressing of which many principles of natural justice would certainly be outraged.

The first location wherein such experiments would be tried would probably be in the vicinity of the royal residence, where

the king's purveyors would speedily learn of scarcity, and of consequent advance of prices.

In an insular situation like our own we should not long remain uninfluenced by external supplies, and hence a system of regulating imports and exports would become necessary; for if the holders of supplies here could make a market for them elsewhere, they would seek to avoid the restrictive influence of fixed prices at home. So also if a superabundance of supplies prevailed in neighbouring countries, rendering it advantageous to bring these in and sell them at the fixed prices, or below them, confusion or dissatisfaction would arise. This would necessitate legislative restrictions as to our external commerce.

There would thus come to be two sets of legislative restrictions in operation; and it would be certain that in different parts of the kingdom different influences as to supply and demand must arise, and hence the system might become further hampered with local or municipal regulations.

But yet another difficulty might and would arise. It would become apparent that periods of scarcity would necessarily cause some relaxation of the most stringent rules as to prices; hence the owners of non-perishable products would resort to storing these away in view of securing the enhanced price consequent upon periodical scarcity. But this process carried on by a number of persons would be certain to affect prices, and complaints would ensue. This would lead to the adoption of further legislation; and forestallers, and engrossers, and regrators would be restrained in their practice by the strong arm of the law.

Here we should have another, a third, link in the chain of legislation: 1. Holders of consumable produce at home must sell to consumers at home at fixed prices; 2. There must be no selling to or buying from persons abroad, for that would upset the notion of fixed prices; 3. Further, the produce must be consumed *pari passu* as it is produced—there must be no saving up for a rainy day, because that too upsets fixed prices, opens, indeed, the door to speculation.

But this is all "fine weather" legislation; what is to be done when supplies fail at home? Answer, open the ports and invite the foreigner to come in; English money will speedily bring him to our gates. So it has often happened.

Again, periods of scarcity pass away, abundant harvests prevail; there is a plethora of grain. Further, other countries are in want of supplies, and the money which would be so obtained would be of service here. What now is to be done? Our ships are freighted, a good price is obtained, the trade is found profitable to all concerned, and it increases rapidly. By means of this new outlet,

a stimulus is given to our agriculture; the prosperity of the country is seen to be rapidly developing; and finally (1688) we begin to pay a *bounty* to our own growers for every quarter of grain they send away from our shores.

It must not be supposed that the process last detailed has gone on smoothly during the several centuries which are embraced in this introductory review. There were frequent intervening periods of scarcity. During some of these the ingenuity of parliament was taxed to the uttermost to devise a remedy suited to the occasion, and yet not calculated to overthrow the purely artificial system which the legislature in its want of wisdom had set up. The solution was found in the adoption of a *graduated scale of prices*; when grain rose beyond a certain indicated price here (at home) no more was to go out; but if the pressure were extreme, the ships of the foreigner might come in. When grain fell below a certain fixed price, the ships of the foreigner must be barred from our ports, while our own might sail away freely.

It is but too apparent that under such a makeshift system of legislation all commerce was a system of restriction, evasion, and compromise, resting upon the fallacious belief that one nation's gain was another's loss, and that commercial advantage was only to be measured by the balance of coin received for commodities, and not by the exchange of the useful products of industry, varying with the peculiar soil, climate, and manners of the exchangers.

Nor was this all. There were our continental neighbours looking on, and we may be sure looking on to their own advantage. The Dutch, ever keenly alive to their own interests, and deeply skilled in finance and in many of the other problems associated with successful commerce; and this too almost centuries before ourselves. Those Dutchmen many times stored the wheat which the government bounty to our growers enabled them to sell at a cheaper rate than the average European price, and sold it to us again in dear seasons at a large profit!

But it was not only the Dutch with whom we were playing at cross-purposes. There were portions of our own kingdom, to wit, *Scotland* and *Ireland*, against whom we set up legislative barriers of the most restrictive character, and they appear frequently to have retaliated upon us in kind. The mass of legislation which ensued as a consequence was simply appalling. I have not been able to make an exhaustive analysis of the Scotch and Irish Acts as bearing upon grain imports and exports, but I have reviewed perhaps enough of them to indicate their general scope. It is however, to be noticed that the first example of legislative wisdom in encouraging *exports* of which we find any record occurred in *Ireland* in 1323-24; and still further, the inhabitants of some of

the islands of the English seas, as that of Man, Jersey, Guernsey, &c., which depended upon parts of this country to a greater or lesser extent for their grain supplies, stood in great peril of being starved, by reason of our constantly changing laws and regulations regarding exports. Special provisions had to be made for their sustenance; nor were they always loyal to us, for grain which was shipped in view of their benefit was sometimes reshipped to those countries from whom we had excluded ourselves by our legislation, to the great pecuniary advantage of the parties concerned.

It will be observed that I nowhere contend that in periods of emergency the legislature should not step in and endeavour to deal with the necessities of the hour. We have high examples of such temporary restrictive regulations in connection with the more enlightened nations of antiquity.* My remarks are entirely directed to the folly, in my judgment, of attempting to regulate commerce to the subversion of the great principles of supply and demand. The extent to which this species of adverse legislation has been resorted to in past times (and there are some who would now have us try our hand at it again), can only be realised by reference to such detailed summaries as are given in the tables which follow. See especially Tables IX, X, and XII.

Out of the desponding maze of legislation just reviewed, we suddenly emerge into a bright and cheering prospect. It was in 1776 that Adam Smith published his "Wealth of Nations," a book that deserves to live, and will live as long as the human race shall last. A few sentences of its teachings are sufficient to dispel the illusions of all the legislation which had beset this question of famines (as also many other economic questions) during as many preceding centuries. Labour, he contended, was the one source of wealth; and it was by suffering the worker to procure his own interest in his own way, that the public wealth would best be promoted. Any attempt to force labour into artificial channels, *to shape by laws the course of commerce*, to promote special branches of industry in particular countries, or to fix the character of the intercourse between one country and another, is not only a wrong to the worker, or the merchant, but actually hurtful to the wealth of the State.† There was an undergraduate at Cambridge who

* B.C. 350—"The Selybrians were in want of money; and as there was a law among them not to export corn in a season of famine, and they had stores of corn of the preceding year, they passed a decree that private persons should give up their corn to the State at a fixed price, each leaving behind a year's supply; then they gave leave to any one who chose to export it, affixing to it such a price as seemed good to them."—"ARISTOTLE'S ECONOMICS" (Bohn's translation), p. 312.

† There were indeed several previous writers who had enforced like views, but had not reduced them to a science. See especially Table XI, date 1669 (Mun).

read this book; who became instilled with its philosophy; his name was William Pitt. When he became prime minister, and while he so remained, the statute book ceased to be loaded with such "Acts" of folly, as we have grown weary of recording. But it took yet another half-a-century to beat down the barriers of prejudice, and set up in their stead the electric illuminations of free trade as applied to the food of the people, and to commerce in general.

The details of the various legislative enactments of the English Houses of Parliament, of which the preceding outline is but a reflex, will be found amplified, with I hope sufficient exactness, in the three tables already referred to (IX, X, and XII), but in No. X more especially. This table I had hoped to supplement by a statistical return of the amount of grain and grain products collectively imported into, or exported from this kingdom, from the earliest date (1697) when any such returns are accessible; but I have found it impossible to obtain the required data, furnished on a uniform plan. It will be useful here to take a condensed view of the effect of the legislation embodied in Table X, as follows:—

The several laws enacted previously to the year 1765 formed a system for regulating the grain trade upon the principle of *restraining importation, and encouraging exportation*. In 1765, and each of the eight following years, laws were made prohibiting the *export* of grain, and allowing the *import duty free*. In 1773 a law was passed (13 George III, cap. 43) which established a new system with regard to the corn laws. The laws underwent further changes in each of the years 1791 and 1804. In 1815 an entire alteration took place in the system; foreign corn had previously been admissible to home consumption for several centuries, on the payment of *duty*, but this was now entirely prohibited. Wheat might indeed be brought in free of duty when the price was over 80s. per quarter; but at other times it could only be brought in and warehoused, to be used *when the above limit of price was reached* (with an exception in favour of the British Colonies in North America). In 1822 the same system was continued, the regulating price for wheat being lowered to 70s., and the consumption price for other kinds of grain was correspondingly reduced.

The effects resulting from the various systems enumerated (omitting the free interchange with *Ireland*, see Table X, 1806), are shown in the following figures; which, however, can only commence with the date of the first returns available:

Dates inclusive.	Periods.	Imports.	Exports.	Excess of Imports.	Excess of Exports.
		Qrs.	Qrs.	Qrs.	Qrs.
1697-1764....	68 years	1,723,818	34,926,825	—	33,203,007
1765-73.....	9 "	3,151,020	1,468,092	1,682,928	—
'74-91.....	18 "	11,945,822	5,419,625	6,526,197	—
'92-1804....	13 "	18,577,612	1,832,515	16,745,097	—
1805-14.....	10 "	7,697,863	1,430,938	6,266,925	—
'15-25.....	11 "	11,138,448	2,007,991	9,130,457	—

Note.—The returns for 1813 are estimated at the mean of 1812-14—the records of the custom house having been destroyed by fire.

Another estimate made about this date, brought down to the year 1800, was as follows:—*

	Quarters.
The annual average importation of wheat into Eng- } land for twenty-five years, had been..... }	162,000
The annual average importation of wheat into Eng- } land for the last ten years }	400,000
Importation in the year ending September, 1800	900,000
These 900,000 quarters were sold in our markets on } an average at 95s. per quarter, making..... }	£ 4,275,555
Flour, rye, barley, and oats imported during the last } year, amounting in value to upwards of	1,724,445
Making a total of	<u>6,000,000</u>

It was estimated by the late Mr. J. R. McCulloch in the "Edinburgh Review" (1820), that a repeal of the restrictions on the importation of foreign corn would of itself, by permitting the consumers to import food from the cheapest markets, lead to a saving of 25 millions a-year in the purchase of the most indispensable of all the necessaries of life! Coming down to our own period, we now rely mainly upon imported grain supplies. The "Statistical Abstract" states the imports of wheat and wheatmeal and flour into the United Kingdom in the year 1876 at 51,904,433 cwt.:—namely, 44,454,657 cwt. of grain, and 5,959,821 cwt. of meal and flour, to which last item an addition is made on the principle that 1 cwt. of wheat flour is equal to $1\frac{1}{4}$ cwt. of wheat in grain, so that the total is shown in weight of grain. This total was a larger quantity than in any previous year except 1875. Of this total no less than 22,223,403 cwt. came from the *United States*, being more than in any year except 1874 and 1875. The import from *Russia* in 1876 reached only 8,911,788 cwt., a quantity smaller than in any of the preceding ten years except 1874, and only about half the quantity of 1872. The "Statistical Abstract" does not distinguish

* "Thoughts on Present Prices, 1800," p. 27.

the amount of wheat imported from *Australia* or from *India*, but these sources of supply are rising into importance. Mr. Juland Danvers, Government Director of the Indian railways, observes in his railway report (1877) that it would hardly have been thought possible twenty years ago that a granary for England would have been found in the valleys of the Ganges, Jumna, and Indus; but, notwithstanding their distance from a seaport, there had been, during the last two years, a rapidly increasing production of grain in the provinces watered by those rivers, and a large export trade springing up. In 1871 the export of wheat was 248,522 cwt., in 1876 it was 5,583,336 cwt., which was sent chiefly to England. Mr. Danvers says :—

“When the fibres of Russia were denied to us during the Crimean war, India stepped in and supplied us with jute, and has continued to do so to an increasing extent ever since. The same may now happen with respect to wheat, barley, &c. A country with a soil and climate capable of producing corn, tea, and tobacco, as well as coffee, opium, sugar, indigo, and cotton, must possess powers which, with the assistance of regular and cheap transport, will be ready to meet any demand that may be made upon it.”

It seems an anomaly that, with her famines on hand, India is able to supply food for other parts of the world; but it has to be remembered that the natives there subsist very much on *rice*, and on inferior cereals designated as “dry crops,” of which we know nothing in this country; and then there is the internal transport difficulty.

The following table gives some important details regarding the quantity and source of a chief item in our food supplies :—

The Supplies of Foreign Wheat and Flour brought into the United Kingdom during the Ten Years 1869-78, Reduced to Quarters.

Contributed by the following Countries.	1869.	1870.	1871.	1872.	1873.
	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
Russia	2,113,461	2,369,814	3,606,692	4,117,071	2,214,945
Denmark	126,879	75,673	30,085	99,502	69,636
Germany	1,738,470	1,032,980	980,162	1,198,479	693,398
France	507,509	242,870	41,735	1,039,355	747,078
Turkey, &c.....	549,209	112,943	327,435	193,401	84,804
Egypt	231,802	24,219	204,091	539,355	290,861
United States—					
Am. Atlantic ... }					
“ Pacific..... }	3,530,743	3,468,844	3,606,275	2,198,496	5,007,640
Chili	130,870	138,308	126,814	330,951	359,337
British N. America ..	782,329	783,995	872,178	493,722	996,448
Other countries	307,524	239,990	381,783	723,102	1,398,159
Austrian territories ..	237,822	13,955	55,187	12,630	6,860
Total	10,242,338	8,503,597	10,232,540	10,946,064	11,869,166

Supplies of Foreign Wheat and Flour into the United Kingdom—Contd.

Contributed by the following Countries.	1874.	1875.	1876.	1877.	1878.
	Qrs.	Qrs.	Qrs.	Qrs.	Qrs.
Russia.....	1,318,728	2,306,606	2,023,675	2,501,076	2,084,522
Denmark.....	38,604	113,907	60,581	17,033	—
Germany.....	919,371	1,523,510	802,189	1,613,147	1,500,756
France.....	257,747	799,883	377,252	887,867	201,458
Turkey, &c.....	152,232	301,877	511,898	289,158	55,408
Egypt.....	67,818	483,196	285,888	564,856	50,191
United States—					
Am. Atlantic ...	5,412,963	4,084,710	3,639,828	3,376,373	6,664,199
„ Pacific.....		1,979,707	1,515,540	2,047,170	1,058,405
Chili.....	444,307	207,895	226,758	169,848	11,670
British India.....	—	308,063	756,897	1,408,832	419,839
Australia.....	—	264,676	601,330	98,237	336,888
British N. America..	989,822	934,337	638,390	744,811	684,955
Other countries.....	903,823	370,528	540,903	886,293	662,126
Austrian territories..	649	—	—	—	—
Total.....	10,506,064	13,678,895	11,942,672	14,604,707	13,730,422

Note.—For this table I am indebted to Mr. Henry M. Paul, a Fellow of this Society, who has drawn most of his data from the “Statistical Abstract.”

It is estimated that a good *grain harvest* in the British Empire and dependencies, and in those countries from which we draw our food supplies, means an aggregate bounty of some 200 millions sterling, “poured from the heavens into the earth’s treasury.”

Turning to other articles of food, in 1875 the inhabitants of the United Kingdom consumed 1,186,641 cwt. of beef from imported live cattle; 454,007 cwt. of mutton from imported live sheep; 71,927 cwt. of pork from imported live swine; 3,114,809 cwt. of imported dead meat—*i.e.*, bacon, pork, hams, cured beef, &c.; 15,820,006 cwt. of home-grazed beef; 8,701,451 cwt. of home-raised mutton; and 4,348,944 cwt. of home-bred pork; the total consumption of meat (exclusive of poultry, game and other meat not classified with butcher’s meat) of the United Kingdom being 33,697,785 cwt. A reduction of 2*d.* per pound (the lowest estimated present rate of overcharge by retail traders to their customers) on this vast quantity of meat would result in a yearly saving to the whole country of 31,451,264*l.* 2*s.* 8*d.*

The value of the imports of meat and provisions in 1854 was 5,782,164*l.*; of grain and flour 21,760,282*l.*—total 27,542,447*l.* In 1878 the value of meat and provisions imported reached 30,364,853*l.*; of grain and flour 58,372,624*l.*—total 88,737,477*l.*

All this is but a mere glance at the interesting problems associated with our modern food supplies.

TABLE IX.—(*Internal Regulations*). *Imperial and Municipal Restrictions on the Price of Food and Dealings therein.*

Corn has provided a common article of food from the earliest ages of the world; and the baking of bread was known in the patriarchal ages.—See Exodus xii, 15.

A.D.

1203 ... 3 John. The first statute in England regulating the sale of bread, as to its weight and price, was the *Assisa Panis* of this year. The chief justiciary and a baker commissioned by the king had the inspection of the assize.—MATTHEW PARIS.

We have never met with an authentic copy of this reported statute, and we therefore prefer to fall back upon that of A.D. 1266 (51 Henry III) as given in the *Statutes of the Realm*.

'66 ... The statute we find under this date is usually designated the *Assisa Panis et Cervisie* (the assize of bread and ale), and mostly embodies the following introductory paragraph, "The king, to whom all these presents shall come, greeting: We have seen certain ordinances of the assize of bread and ale, and of the making of money and measure, made in the times of our progenitors, sometimes kings of England in these words." Then follows the enactment, as translated from the Latin.

When a quarter of wheat is sold for *xii d.* then wastel bread of a farthing shall weigh *vi l.* and *xvj s.* But bread cockit [of a farthing] of the same coin and bushel, shall weigh more than wastel by *ii s.*; and [cocket bread] made of corn of lower price shall weigh more than wastel by *v s.* Bread made into a *simmel* shall weigh *ii s.* less than wastel [because it is twice baked]. Bread made of the whole wheat shall weigh a cocket and a half, that is to say, a cocket shall weigh more than a wastel by *v s.* Bread of treet shall weigh *ii wastels*. And bread of [all sorts of common] shall weigh two great cockets.

When a quarter of wheat is sold for *xviii d.* then wastel bread of a farthing, white and well baked, shall weigh *iv l. x s. viii d.*

When for *ii s.*..... *iii li. viii s.*
 " *ii s. vi d. liv s. iv d. ob. q.*
 " *[xlvi s.]*
 " *iii s. vi d. [xlii s.]*
 " *iv s.*..... *[xxxvi s.]*
 " *iv s. vi d. xxx s.*
 " *v s.*..... *xxvii s. ii d. ob.*
 " *v s. vi d. xxiv s. viii d. q.*
 " *vi s.*..... *xxii s. viii d.*
 " *vi s. vi d. xx s. xi d.*
 " *[vii s.]*..... *xiv s. [i d.]*
 " *vii s. vi d. xviii s. id. ob.*
 " *viii s.*..... *xvii s.*
 " *viii s. vi d. xvi.*
 " *ix s.*..... *xv s. q.*
 " *ix s. vi d. xiv s. iv d. ob. q.*
 " *x s.*..... *xiii s. viii d.*
 " *x s. vi d. xii s. xi d. q.*
 " *x s.*..... *xii s. iv d. q.*

When for *xi s. vi d. xi s. x d.*
 " *xii s.*..... *xi s. iv d.*
 " *xii s. vi d. i os. 10½ d.*
 " *xiii s.*..... *i os. 5½ d.*
 " *xiii s. vi d. i os. 2½ d.*
 " *xiii s.*..... *9 s. 8 d.*
 " *xiii s. vi d. 9 s. 2½ d.*
 " *xv s.*..... *9 s. 2 d.*
 " *xv s. vi d. 8 s. 9½ d.*
 " *xvi s.*..... *8 s. 6 d.*
 " *xvi s. vi d. 8 s. 2½ d.*
 " *xvii s.*..... *8 s.*
 " *xvii s. vi d. 7 s. 9½ d.*
 " *xviii s.*..... *7 s. 6½ d.*
 " *xviii s. vi d. 7 s. 4½ d.*
 " *xix s.*..... *7 s. 2 d.*
 " *xix s. vi d. 6 s. 11½ d.*
 " *xx s.*..... *6 s. 9½ d.*

Gain to the Baker.—And it is to be known, that then a baker in every quarter of wheat, as is proved by the king's bakers, may gain *vi d.* and the bran and two loaves [for advantage], for three servants *id. ob.*, for two lads *ob.*, in salt *ob.*, for kneading *ob.*, for candle *q.* for wood [*ii d.*] for his butel *ob.*

Assise of Ale.—When a quarter of wheat is sold for *iii s.* or *iii s. iv d.*, and a quarter of barley for *xx d.* or *ii s.*, and a quarter of oats for *xvi d.*, then brewers in cities ought and may well afford to sell two gallons of beer or ale for a penny, and out of cities to sell

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1266

iii [or iv] gallons for a penny, and when in a town iii gallons are sold for a penny, out of a town they ought and may sell four; and this assise ought to be holden throughout all England.

Punishment of a Baker or Brewer Transgressing the Assise.—And if a baker or brewer be convicted that they have not kept the fore-said assises, the first, second, and third time they shall be amerced according to the quantity of their offence; and that as often as a baker shall offend in the weight of a farthing loaf of bread not above ij s. weight, that then he be amerced as before is said; but if he exceeds ij s. then [he is to be set upon] the pillory without any redemption of money. In like manner shall it be done if he offend oftentimes and will not amend, then he shall suffer the judgment of the body, that is to say, the pillory if he offend in the weight of a farthing loaf under two shillings weight as is aforesaid. Likewise the woman brewer shall be punished by the tumbrell, trebuchit, or castigatorie, if she offend divers times and will not amend.

In the *Judicium Pillorie* (the judgment of the pillory) which is usually dated back to this year (1266) is contained the following clauses:—

“First, they shall inquire the price of wheat, that is to wit, how a quarter of the best wheat was sold the last market day, and how the second wheat, and how the third, and how a quarter of barley and oats.

“After, how the baker’s bread [in the court doth agree], that is to wit, wastel and other bread after wheat of the best, or of the second, or of the third price.

“Also upon how much increase or decrease in the price of [a quarter of] wheat a baker ought to change the assise and weight, of his bread.

“Also how much the wastel of a farthing ought to weigh and all other manner of bread after the price of a quarter of wheat that they present.”

1276

Edward I. Besides Acts of parliament, passed in regular form, there were many other modes whereby the commands of the sovereign and his advisers were promulgated. These were severally by Charters, Acts of Grace, Letters Mandatory, Ordinances, and Proclamations (the latter becoming in due course more popular), severally issued on special emergencies. We shall have to glance at these: for the statute book is seen to be an incomplete authority to follow. The king at this date commanded the mayor and aldermen of London to make statutes for governing the hucksters of fish and fowl. A record of what was done under it is to be found in the horn book of the Corporation of the city under the title of “Statuta de poletria et pisce facta tempore Maioratus Henry de Waleys,” viz.:

Tempore Henrici de Waleys, &c., i.e. in the time of Henry de Walys, maior of London, Nicholas de Winton, Henry de Coventre, sheriffs by the command of the lord the king, with the assent and consent of the great men of the kingdom and citizens aforesaid, it was ordained that no huckster of fowle [mango avium] go out of the city to meet them that bring poultry, to the city, to make any buying from them; but buy in the city, after the buyers of the lord the king, of the barons, and the citizens, have bought and had what shall be needful for them, namely, after 3 o’clock and not before. And then let them buy thus: That they may afford an hen of the better sort for 3*d. ob.* And two pullets of the better sort for 3*d. ob.* And one capon of the better sort for 2*d. ob.* And from Easter to Whitsuntide a better homefed goose for 5*d.* And from Whitsuntide to St. Peter’s ad Vincula, for 4*d.* And from that festival throughout the whole year always, one of the better sort for 3*d.* Also for a wild goose of the better sort, 4*d.* Three young pigeons of the better sort

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1276

for 1*d.* One mallard for 3*d. ob.* And two cereels for 3*s.* And two wydech [wild ducks] for 3*d. ob.* And four begaters 1*d.* And a dozen larks 1*d.* One better feasant 4*d.* One better botor for 6*d.* A better heron 6*d.* One better corlune 3*d.* One better plover 1*d.* One swan for 3*s.* One better crane for 3*s.* A better peacock for 12*d.* A better coney with the skin 4*d.* And without the skin 3*d.* The flesh of a good hare 3*d. ob.* One kid from Christmas to Lent, of the better sort, for 10*d.* At other times of the year for 6*d.* One better lamb between Christmas and Lent for 6*d.* And at other times of the year for 4*d.*

It is also ordained that no huckster of fish, or fishmonger who sells again to others, go out to meet those that bring or carry in fish to the city, to make a forestal thence; nor have any partnership with a stranger, who brings from the sea to the city; but let them seek for fish in their own ships, and permit foreigners to bring it, and to sell when they are come in their own ships. Because by such partnership they who are of the city, and have known the state of the city, and the defect of victuals, will hold the fish at a greater dearness than foreigners who shall not have known it. And also that they who are of the city, when they cannot sell as they will, lay it up in cellars, and sell dearer than the strangers would do if they came without partnership, and knew [not] where they might be harboured.

Nor let them buy anything in the city until the king's servants, &c., have bought, and not before 3 o'clock. And if they who have brought fish shall come after 3 o'clock, let them not sell that day, but let them sell on the morrow morning. And if they expect more, let the fish be taken into the lord king's hand, and let them keep no fish, except salt fish, beyond the second day of their coming. Which, if it shall happen to be found let them lose their fish, and be at the mercy of the Lord the king [to fine them].

And thus let the hucksters, *i.e.* the fishmongers, buy, that they afford,

A better plaise for 3*d. ob.*, a middling one for 1*d.*, and others less, as consequently they seem to be worth.

Also twelve better soles for 3*d.*, and others as they are worth. Also, a better conger for 12*d.*, others as they may be worth.

A better turbot for 6*d.*, and others as they are worth.

A gallon of oysters for 2*d.*

A better fresh salmon between Christmas and Easter for 5*s.* And after Easter for 3*s.* And others middling and less as they are worth. . . .

One lampred of nautes, in their first coming, and of the better sort, for a month, for 16*d.* And after a better lampred for 8*d.* And after Easter for 6*d.*

Also, one better fresh lamprey, of Severne or Thames, between the purification of the Blessed Virgin Mary and the middle of Lent, for 4*d.* And after the middle of Lent to Easter for 2*d.*

And let the lampreys of nautes be sold in the public market wherein they are accustomed to be sold, and not in houses, unless they be hid by night.

And let merchant strangers come to the city, make there abode there, and do as they have been wont to do.

I have greatly curtailed the list of fishes enumerated in the ordinance, partly on the ground of space, and especially because the names they bear therein are now unknown to us.

'85 In *Statum de Pistoribus*, &c. (statute concerning bakers, &c.), sometimes attributed to 51 Henry III, but appearing more probably to belong to this reign, 13 Edward I, is contained the following:

"Here begineth the rule for punishing the infringers of the assise of bread and ale, forestallers, cooks, &c."

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1285

"The assise of bread shall be kept according as it is contained in the writing of the Marshalsey of our lord the king, delivered unto them, after the sale of wheat, that is to wit, the better, the worse, and the worst. And well wastel bread, as other of what sort soever they be, shall be weighed, according as it is said [of the sale of the meaner wheat]. Neither shall the assise of weight of [wheat] be changed [more than 6d. increasing or decreasing, as it is in the sale of the quarter].

"A baker, if his bread [be founden a farthing weight lacking in] 2s. 6d., or under, shall be amerced; and if it [pass the same number] he shall suffer punishment of the pillory, which shall not be remitted to the offender either for gold or silver; and every baker shall have a mark of his own for [each sort of] bread."

Then the following:

"A butcher that selleth swines flesh meazled, or flesh dead of the murrain, or that buyeth flesh of Jews, and selleth the same unto Christians, after he shall be convict thereof, for the first time, he shall be grievously amerced; the second time he shall suffer judgment of the pillory; and the third time he shall be imprisoned and make fine; and the fourth time he shall forswear the town. And in this manner shall it be done [of all that offend in the like case].

"And if any presume to sell the meal of oats adulterated, or in any other deceitful manner, for the first offence he shall be grievously punished; for the second he shall lose all his meal; for the third he shall undergo the judgment of the pillory; and for the fourth he shall abjure the town."

'86

In this statute it was also provided that "every pillory or stretch-neck, must be made of convenient strength, so that execution may be done upon offenders without peril of their bodies."

'90

At this date, and probably for some time earlier, the bakers who supplied London with bread mostly lived at Stratford-le-Bow, Essex, probably on account of its proximity to Epping Forest, where they could obtain firewood at small cost. At a later date Bromley (Bremble), also by Bow, but nearer to London, was the seat of many bakeries. The bread was taken to the city, to the market in Bread Street in carts, and was often seized on its way for being of light weight or made of unsound materials.

Note.—It seems that the bakers of Southwark were not allowed to vend bread in the city, because they were not amenable to the city laws. In the *Horn Book*, under date 1293, is the following entry: "*Item*, that no regrators shall come from below London Bridge, for the buying and preparing of bread in the city; because the bakers of Southwark are not permitted by the statutes of our city to come from without the city." (See 1302.)

'98

26 Edward I. A mandate for the preservation of peace within the city was issued by the king, addressed to Henry le Galeys, mayor, which recites and ordains as follows:

"Edward by the grace of God, &c., to the mayor and sheriffs of London, greeting. Forasmuch as we have heard that the bakers, and brewsters and millers, in the city aforesaid, do frequently misconduct themselves in their trades. . . . We of our counsel, wishing to apply a fitting remedy to all the premises, and to strike both them and others with fear of so offending, do command you, and strictly enjoin, that you will so chastise such bakers, brewsters, and misdoers, with corporal punishments, and so visit the other offences, at your discretion, that they may excite in others in like case a fear of so offending. And that all corn to be ground at mills within the city aforesaid, and without, shall be weighed by the millers, and that such millers shall answer in like weight in the flour coming therefrom. And to the matters aforesaid, and all other things which unto the

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.		
1298	....	office of the mayoralty of the same city, and to the preservation there of our peace, do pertain, you are to cause to be inviolably observed. Witness myself at York, the 28th day of May, in the twenty-sixth year of our reign."
1302	....	30 Edward I.—The bakers of London were first allowed to sell bread in their own shops this year. Previously all the bread was sold in Bread Street (off Cheapside).—Stow. The London Bakers Company was incorporated 1307.
1307	....	Edward II. In the horn book of the corporation of London there is (p. 234) under the title of: Incipiunt statuta et provisiones civium, London, de assiza panis, the following: "Secundem consuetudinem civitatus, London, &c.—According to the custom of the city of London, an assay ought to be made of bread every year, after the feast of St. Michael, by four discreet and sworn men, chosen for this purpose: and according to the proportion of the common weight of that assay, the bakers ought to bake their loaves throughout the whole year: namely, so that if afterwards bread can be sold dearer than it was at the making assay, then the bread ought to be of less weight than it weighed in the assay. And if it were of less price, then it ought to weigh more. Only we ought cautiously to provide that accordingly to the quantity whereby the corn increaseth in price or decreaseth, the bread increase or decrease in weight." The exact manner of making the assay, we learn from the same authority, was as follows: "That the said four sworn men should buy three quarters of bread corn [or meal] in the sack upon the pavement in the three markets: one at Grassechurch, another at St. Botolph, Billingsgate, and the third at Queenhith. Of which they were to make a wastell, and another loaf less fine (which I think they called coket), and after they had baked these loves with the greatest diligence, then they went and presented them hot before the maior and aldermen in Guild-Hall. And thus hot they were weighed. And then (saith the statute) the buying of the bread corn shall be considered: and 8 <i>d.</i> for every quarter shall be allowed to the baker for his charges. The selling also of the brann shall be considered, and shall be withdrawn out of the sum that the meal was bought for. And if [after divers exact rules for weighing the bread] there be more loaves in number than there shall remain halfpence in the sum of the meal bought, when the charge is allowed, then let there be a partition of the weight of those loves remaining and above. And so every loaf shall be made of just weight. And if there be fewer loaves than the number of halfpence in the sum the meal was bought for when the charge is allowed, then let it be withdrawn from the weight of each loaf equally, so far until there result so many loaves of equal weight, as there are halfpence in the number of the sum the meal was bought at when the charge is allowed. "If there shall be more loaves than the number of halfpence, let the part exceeding be taken from the number of loaves, and see the how manieth part it will be to the number of halfpence; and according to that proportion let the weight of each loaf be augmented. For example sake, if there be 20 halfpence and 24 loaves, every loaf at the weight of 4 <i>os.</i> , then the number of loaves increaseth above the number of halfpence, which are but 20; and it is the fifth part, since 5 times 4 make 20. Therefore the weight of every loaf increaseth by the fifth part of its weight; and the weight of the loaf was 4 <i>os.</i> , whose fifth part is 8 <i>s.</i> Therefore 20 loaves shall be each loaf of the weight of 48 <i>s.</i> And so each loaf shall be of just weight.

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1307 ...

"If there were more halfpence than the number of loaves, we must see the how manieth part was the number increasing of the number of loaves; and if it were a third part, a fourth part is to be lessened from every loaf; and if it were a fourth part, a fifth part is to be lessened. For example, if the number of halfpence were 24 and the number of loaves 20, then is the number increasing to as before, which is the fifth part of 20. Therefore each loaf decreaseth of a sixth part of its weight. If the weight therefore shall be 40s., it shall be 3s. 4d. And so the number of loaves is equalled to the number of halfpence, and the weight is the same."

While this explanation helps us in regard to certain quotations which arise in the denomination of values in this paper, it has not the advantage of making itself clear to the understanding of any ordinary reader. We must be content to take it as we find it. It is quite certain that the actual *weight* of the coins mentioned in each case was used to determine the weight of bread in the preceding assise. We next advance to another stage of the proceedings taken by the city authorities in the matter of bread.

There were four principal halimotes in the year, when all the city bakers were bound to meet together: whereof the first was kept after the first of St. Michael, for the profit of the city and the kingdom. That the bakers assembled together take and know their new sheriffs and retain in their memories the statutes of the city belonging to the bakers, and receive the assay of bread.

The second halimote was held after the nativity of our Lord: that if there be any transgression made in the first term of the year it may be there without difficulty more fully amended.

The third halimote was accustomed to be called together after the close of Easter: as well for the coming of the king as of the nobles of his kingdom; lest their might seem to fall out a want of this kind of service—that is, in a convenient supply of the city and inhabitants with good bread.

The fourth halimote was after the nativity of St. John Baptist: that what should be solemnly appointed by the common council and providence (*sic*) of the city in the first three terms, in this fourth term might be profitably confirmed. So that the goodness of so great a work might not run to disprofit by ignorance or by negligence.

To these four halimotes all the bakers must come. And if they come not, nor excuse and esoin themselves reasonably, they forfeit to the sheriff 21d.

'14 ... 8 Edward II. At this period the king again attempted to come to the rescue of the city, by setting a "reasonable price" on flesh and fowl, in the ordination which follows:—

Edwardus *Dei Gratia*, &c.—Edward by the Grace of God, King of England, Lord of Ireland, Duke of Aquitan, to the Sheriffs of London, greeting. "We have heard the complaint of the archbishops, bishops, earls, barons, and others of the commonality of our kingdom, by their petition exhibited before us and our council: containing that there is a great and, as it were, intolerable dearth, in these days, of oxen, cows, sheep, hogs, geese, capons, hens, chickens, pigeons, and eggs; to the no little loss and grievance of them and all others dwelling within the same kingdom. For which they have besought us instantly that we would take care to provide upon this concerning some suitable remedy.

"We therefore yielding to the aforesaid supplication for the common profit of the people of the said kingdom, as it seemed expedient to us, have ordained, with the counsel and assent of the prelates, earls, barons, and others, being of our council, in our last parliament held at Westminster:

"That a better sort ox, alive, saleable, fat, not fed of grain, be sold

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1314

for the time to come for 16s., and not above. Or that if it be fed with grain, and be fat, then to be sold for 24s. at most.

"And that a better sort of cow, alive, and fat, be sold for 12s.

"A hogg, two years old, and fat, for 40d.

"A sheared mutton, fat, for 14d.

"A fat goose for 2d. ob. In our city aforesaid for 3d.

"A capon, good and fat, for 2d., and 2d. ob.

"A fat hen for a 1d., and 1d. ob.

"Two chickens for 1d., and 1d. ob.

"Three [four overwritten] young pigeons for 1d.

"Twenty eggs for 1d.

"And that if it happen to be found, that any persons, or any one person, will not sell these saleable things for the price appointed, as is before set forth, then the said saleable things shall remain forfeited to us. And we will that the aforesaid ordination from this time be firmly and inviolably observed in our said city.

"We command, firmly enjoining you, that in our city aforesaid, and suburb of the same, where ye shall see it to be expedient, that the aforesaid ordination be publicly and distinctly proclaimed; and that ye cause the same from time [*sic*] to be inviolably observed in all and each its articles, under the aforesaid forfeiture, throughout the whole bailifwic. And this omit by no means, as you will avoid our indignation, and preserve yourselves without blame. Witness myself at Westminster this 14th day of March in the eighth year of our reign."

This ordination was afterwards extended through the whole kingdom, in all cities, boroughs, villages, &c. "But (in the language of Stow) the king was fain the next year to send a brief of reclamation of his former ordination, finding it did more harm than good." It was as follows:

"The king to the sheriffs of London, greeting: Although we lately commanded you that in each place in the aforesaid city, where it should seem to you to be best expedient, ye should cause it to be publicly proclaimed, that oxen, cows, hogs, sheep, geese, capons, hens, chickens, pigeons and eggs should be sold at a certain price: Because, nevertheless, we have understood that such a proclamation, which at the time we believed would be for the profit of the people of our realm, redounds to their greater damage than profit: We command you, that in the said several places ye cause publicly to be proclaimed, that oxen, cows, hogs, sheep, geese, capons, hens, chickens, young pigeons and eggs be sold for a reasonable price, as was accustomed to be done before the said former proclamation; certifying all and singular that the former proclamation was not made by virtue of the ordination late made by the prelates, earls, and barons, and nobles, of the same realm, and by us accepted, nor was contained in them. Witness myself at Lincoln, the 20th February, in the ninth year of our reign."

This frank confession of errors in judgment, and outstretching of authority, in the matter of government, has a novelty about it to which we moderns are not accustomed.

'16 10 Edward II.—Gilbert Parry was indicted and convicted for selling maslin halfpenny loaves of short weight in the city, "and because it was found that he had been twice drawn on the hurdle, and was now for the third time found in default, it was adjudged that he should be drawn now for the third time, and should then forswear the trade of a baker in the city for ever. And he did abjure it before the mayor and aldermen in full court, &c."—Memorials of London, p. 123. "Maslin" bread was compounded of wheat and rye flour combined. The designation is still current in the north of England.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

- 1336 By 10 Edward III, statute 3, it was enacted that none should be served at any meal with more than two courses, except at certain festivals. But this enactment appears to fall within the pale of the sumptuary laws, and not to have been the result of any special scarcity of food.
- '48 22 Edward III. Pike, in his *History of Crime in England*—a work of the highest authenticity—writing of the punishments of delinquents at this period, says:—
 “Turn where he might, the traveller could hardly fail to light upon some group which would tell him the character of the people he had come to see. Here, perhaps, a baker with a loaf hung round his neck, was being jeered and pelted in the pillory, because he had given short weight; or because when men had asked for bread, he had given them, not a stone, but a lump of iron inclosed by crust. There perhaps an oven was being pulled down, because a baker had been detected in a third offence, and had been compelled to abjure trade in the city for ever. If there were no bakers to be punished on any particular day, the pillories could never have been all without occupants. They were used to punish the sellers of bad meat, poultry, and fish, . . . of oats good at the top of the sack and bad below, . . . and the petty pilferers of every kind.”
 For some verification of this see RILEY's *Memorials of London*. (1858), p. 498.
- '49 By the 23 Edward III, cap. 6, “Victual shall be sold at reasonable prices,” it is enacted as follows:—
 “*Item*—That butchers, fishmongers, regrators, hostlers, brewers, bakers, poulters, and all other sellers of all manner of victual, *shall be bound to sell the same victual for a reasonable price, having respect to the price that such victual be sold at in the places adjoining so that the same seller have moderate gains, and not excessive*, reasonably to be required according to the distance of the place from whence the said victual be carried. (2) And if any sell such victuals in any other manner, and therefore be convict in the manner and form aforesaid, he shall pay the double of the same that he so received to the party damnified, or, in default of him to any other that will pursue in this behalf. (3) And the mayors and bailiffs of cities, boroughs, merchant towns, and others, and of the ports of the sea, and other places, shall have power to inquire of all and singular which shall in anything offend the same; and to levy the said pain to the use of them at whose suit such offender shall be convict.”
 “If the mayors, bailiffs, &c., were themselves engaged on their duties in this regard they were to be grievously punished.”
- '50–51 By 25 Edward III, statute 2, cap. 1, it was enacted that carters, ploughmen, drivers of the plough, shepherds, swineherds, deies, and all other servants, should take liveries and wages, accustomed in the twentieth year of this reign: “so that in the country where wheat was wont to be given they shall take for the bushel tenpence, or wheat at the will of the giver till it be otherwise ordained.”
- '57 By 31 Edward III, statute 1, cap. 10, it is enacted as follows:—“*Item*. Because that the fishers, poulterers, and other sellers of victuals of the city of London by colour of some charters and by evil interpretation of some statutes, made in advantage of the people, that every man may freely sell his victuals without disturbance, and that no mayor, sheriffs, or other minister ought to meddle of the sale; it is accorded and assented, that every man that bringeth victuals whatever they be to the said city, by land and water, may freely sell the same to whom it shall please him, without being interrupted or impeached by fisher, butcher, poulter, or any other; and that the mayor and aldermen of the said city may rate and redress the defaults of fishers, butchers, and poulters, as they do of

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1357 ...

those that sell bread, wine, or ale, notwithstanding charters of franchise, and statutes, customs, or other privileges made or used to the contrary: And that the said mayor and aldermen do the same and put it in execution, upon the pain late ordained touching the city of London, so that the punishment of such be not made in respect of any singular profit."

By the 31 Edward III, statute 2—"An ordinance made concerning the selling of herrings," after certain provisions against forestalling, which will be found in Table XII, proceeded to enact that the "hundred" of herrings should consist of six score, and the "last" of ten thousand, proceeds:—

"And that the merchants of Yarmouth, of London, or elsewhere, shall sell the thousand of herrings to the people after the rate of the price of the last; and that two lasts of shotten-herring fresh shall be sold for the price of the rate of the buying of a last of full herring. And that the people of Yarmouth sell the last of red herring bought for 40s. fresh, or for less than 40s. for half a mark of gain and not above. And that the people of London, at such fair, shall bring the last from Yarmouth to London for one mark of gain and not above. . . ."

In this year also was promulgated, "An ordinance concerning the salt fish of Blakeney," which recites:—

"Whereas it is shown to our lord the king by the commons of his realm of England, in his parliament holden at Westminster the Monday next after the week of Easter, in the year of the reign of our lord the king, that is to say of England, the 31st, and of France the 18th, *that salt fish of Blakeney, and of the coasts adjoining are, and heretofore have been sold at too high and excessive price, to the great damage of our lord the king, of the great men, and of all the people of the said realm, whereof the said commons do pray a remedy; our lord the king desiring to make amendment therein, for relief of his people . . .* hath ordained and established concerning the sale of the said fish in manner following."

Then follow the enactments:—

"1. First, it is ordained that all the ships called doggers and lode-ships, pertaining to the Haven of Blackney, and coasts thereunto adjoining, that is to say, Saterley, Wineton, Clay, Salthouse, Shiringham and Crowmer, shall deliver or discharge their fish within the Haven of Blackney only, betwixt Renord and Hogfleet, and in none other place, upon pain of imprisonment at the king's will, and forfeiture of the same fish. And that no fish be delivered nor carried out of the ship to any house, nor elsewhere before that the owner of the ship wherein the said fish is charged, and the merchant that shall buy the fish, be agreed of the price of the same by clear day."

2. (In abstract). The buyer only shall handle the fish. The price of dogger fish was to be settled at the beginning of Blakeney fair. Fish was not to be kept in houses to be sold by retale. "And that no man buy nets, hooks, nor other instruments pertaining to fishing, in the county of Norfolk, but owners, masters, and mariners of ships that use the mystery of fishing, and which have to do with such things, upon pain of imprisonment, and to be ransomed at the king's will, and to forfeit the things so bought." Six chosen men were to be present at the delivery of the fish, "to search for orgeys," &c.

"60-61 By the 35 Edward III—"An ordinance of herring"—the ordinance of 1357 was modified after the following recital of the causes therefore, "because that the hosts of our town of Great Yarmouth would lodge the fishers coming there with their herring in the time of the fair, will not suffer the said fishers to sell their herrings, nor to meddle

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1360-61

with the sale of the same, but sell them at their own will, as dear as they will, and give the fishers that that pleaseth them, so that the fishers do withdraw themselves to come there, and the herring was set at a greater dearth than it was before." And again, "because it is showed to us and our council by petition in this present parliament, that the sale of herring is much decayed, and the people greatly endangered by the points aforesaid [the provisions of the ordinance of 1357], that is to say, that many merchants coming to the fair, as well as labourers and servants, as other do bargain for herring, and every of them by malice and envy increase upon other, and if one prefer 4os., another will prefer 1os. more, and the third 6os., and so every one surmounteth other in the bargain, and such profers extend to more than the price of the herring upon which the fishers profered it to sell in the beginning; and when every man who claimeth his part of the herring for the price accorded, shall have his part, and the herring be so divided amongst them that the fisher is so much grieved and delayed in the gathering of his money, that he should demand of so many persons, that he looseth his tides, and the advantage of his fishing; and also herein, that no fresh herring is put to sale but from the sun-rising till the sun going down, and not before nor after, which is to the great loss of fishers, and appairing of the herring, and damage of the people that shall buy the same, for the fishing is more by night than by day, and often it chanceth that the fishers be so distant and so laden that they come to the town after the sun going down, or little before, so that they cannot sell their herring in the time for the sale limited, so that they must abide all the night and day after upon the sale of their herring, and lose many tydes and the profits of their fishing; We perceiving the mischiefs and grievances aforesaid, granted that all persons might buy herring openly, not privily; *no man was to interrupt another in a bargain of herring, nor bid upon him*, and fishermen might sell their herring as soon as they arrived; in fact matters got back to much as they were before the first ordinance of herring, except that there was to be no competition in the sales, otherwise the price could not remain fixed!

'62 An Act regulating the price of poultry was passed, viz., 37 Edward III, cap. 3, which was as follows:—*Item.* For the great dearth that is in many places of the realm, of poultry, it is ordained, that the price of a young capon shall not pass *iiij d.*, and of an old *iiij d.*, of an hen *ij d.*, of a pullet *j d.*, of a goose *iiij d.*, and in places where the prices of such victuals be less, they shall hold without being enhanced by this ordinance; and that in the towns and markets of uplands they shall be sold at a less price, according as may be agreed betwixt the seller and the buyer; and justices shall be thereupon assigned by commission to put the thing duly in execution.

During part of this reign a quarter of corn sold in certain localities for 2s.

'63 By 37 Edward III, cap. 8, the diet and apparel of servants was regulated. We quote in brief. *Item.*—"For the outrageous and excessive apparel of divers people, against their estate and degree, to the great destruction and impoverishment of all the land; It is ordained, that grooms, as well servants of lords, as they of mysteries, and artificers, shall be served with meat and drink once a day of flesh or of fish, and the remnant of other victuals, as of milk, butter and cheese, and such other victuals, according to their estate. . . ."

'63-64 By 36 Edward III, cap. 2, the Act of the preceding session (37 Edward III, cap. 5), restricting merchants to deal in one sort of merchandise only [see Table XII] was repealed as follows:—

"*Item.*—To that which was ordained at the last parliament, of living and apparel, and that no English merchant should use but one mer-

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D. 1363-64	chandise. It is ordained that all people shall be as free as they were at all times before the said ordinance, and, namely, as they were in the time of the king's grandfather and his other good progenitors ; and that all merchants, as well aliens as denizens, <i>may sell and buy all manner of merchandise, and freely carry them out of the realm,</i> paying the customs and subsidies therefore due, except that the English merchants shall not of the realm with wool or woofels ; and that none carry out of the realm gold nor silver, in plate nor in money, saving the victuallers of fish that fish for herring and other fish, and they that bring fish within the realm in small vessels, which meddle not with other merchandises ; and that according to the arbitrement of the chancellor."
'65	39 Edward III. An ordinance was promulgated, "as to the sale by hostellers and herbergeours of bread, and horse-bread," &c., which recites :— <p>"Whereas many grievances and damages have been done heretofore unto divers folks repairing to the city of London, for that the hostellers and herbergeours of the same city have made horse-bread to sell in their houses, at their pleasure ; the which has been of no assise, and not of the value that it ought to be ; and also some hostellers and herbergeours do go into Southwark and elsewhere, where they please, to buy horse-bread, and there buy it dry, and at the rate of 18 loaves for 12, and then sell it to their guests at one half-penny the loaf, whereas 4 such loaves are really not worth a penny ; to the great scandal of the said city, and to the great damage of the common people.</p> <p>"Therefore the mayor and aldermen, with the assent of the commons, by way of remedy, ordered that the persons aforesaid shall buy bread for such guests, and for their horses, of the common bakers of the said city, each loaf being stamped with the mark of the baker of whom the same was bought ; that so, every one may see that the bread is of the right assise, and of the real value that it ought to be."—<i>Memorial of London</i>, p. 323.</p>
'82	By 6 Richard II, statute 1, cap. 10, it is enacted as follows :—" <i>Item</i> —It is ordained and accorded, that all manner of foreigners and aliens, being of amity of the king, and of his realm, and coming within the said city of London, and other cities, boroughs, and towns within the said realm, as well within liberties as without, with fish and all manner of other victuals, there carrying and going again to their own countries, shall from henceforth be under the safeguard and the special protection of our said lord the king ; and there it shall be lawful to them and every of them, and by force of these presents, they may from henceforth cut their fishes and victuals aforesaid, without impeachment or denying of any man, in prices, and in part, or in all, at retaile, or in grosse as to them best shall seem, to sell and make their profit ; any charters, statutes, or ordinances, privileges, or customs made or had to the contrary notwithstanding."
'89-90	By 13 Richard II, statute 1, cap. 8, it is ordained and assented (<i>inter alia</i>), and in the right of victuallers it is accorded, that they shall have reasonable gains, according to the discretion and limitation of the said justices, and no more, upon pain to be grievously punished according to the discretion of the said justices where no pain is limited in certain before this time upon the said victuallers. And the sheriffs, stewards of lords of franchises, mayors and bailiffs, and all others that have assise of bread and ale to keep, and the correction of the same, shall take no amercement or fine for any default touching the assise, for the which a man or woman by the law ought to have bodily punishment, according as it is another time ordained by statute . . . and all other that have the order and survey of victuals in cities, boroughs, market towns, and elsewhere, where

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1389-90

victuals be sold in the realm, shall find the statute made, the twenty-third year of the reign of king Edward, grandfather to the king that now is, which beginneth, "Because a great part of the people," touching the estate of victuallers and hostellers, and other sellers of victuals in due execution; and that no hosteller make horse bread in his hostry nor without, that bakers shall make it, and the assise thereof shall be made so that the weight be reasonable *after the price of the corn in the market*; and that the same hostellers shall sell hay and oats after a reasonable price, so that they take not for the bushel but one halfpenny over the common price in the market.

'91 The 15 Richard II, cap. 4—"There shall be but 8 bushels of corn struck to the quarter," recites as follows:

"Item—Whereas it is ordained by divers statutes that one measure of corn, wine and ale should be throughout the realm, and that 8 bushels struck make the quarter of corn; nevertheless, because that no pain is thereupon ordained in the said statutes, divers people of divers cities, boroughs, towns and markets, will not take, neither buy in the said cities and sell in none other place, but 9 bushels for the quarter; and if they cannot buy in that manner, they arrest it as forfeit to the great damage and oppression of all our people, and manifestly against the statute aforesaid."

Whereupon it was ordained and assented that the said statute should be firmly kept and holden as well in the city of London, and in every other place throughout the realm, and that as well by water as by land, notwithstanding any usage in times past to the contrary.

'99 By the 1 Henry IV, cap. 17—"Strangers may buy and sell within the realm victuals in gross or by retail," the Act of 1382 is recited, and it is then set forth as follows: "Our lord the king, considering the same statute to be very profitable in many ways if it were put in execution, by the assent of the lords and commons aforesaid, hath ordained and established, that the said statute be firmly holden, kept and duly executed after the form and effect thereof, notwithstanding the letters patent late granted to the contrary to the fishmongers of London by the said late King Richard upon his last voyage towards Ireland."

1400 2 Henry IV. It will be useful to give at certain stated periods as we proceed, short schedules of the prices of the leading articles of food, and in contrast therewith the price of labour at the same date. We commence at this date; but it must be remembered that the prices varied greatly in different localities, in consequence of the difficulty of transport.

<i>Food, &c.</i>		<i>s.</i>	<i>d.</i>	<i>Labour.</i>		<i>s.</i>	<i>d.</i>
Wheat, per quarter	8	—		A labourer's wages, per day	—	3	
Barley, "	5	4		Reaping grain, per acre	—	9	
Fat sheep	1	—		Threshing grain, per } ..	—	2½	
"	—	10½		quarter			
An ox carcass	7	6		A master mason's wages, } ..	—	4	
A goose	—	4		per day			
A lamb	—	8		Making 100 fagots	—	7	
Best beer, per gallon	—	1½		Sawing, per 100 ft. of deal	1	1	
Claret, "	—	8		A dung cart	1	2	

'01 By 4 Henry IV, cap. 8, the enactment of 13 Richard II, statute 1, cap. 8 (1389-90), was confirmed, regarding the price to be charged by hostellers for horse bread and oats.

'17 4 Henry V. On the 4th February it was ordered that in time of Lent simmel loaves [*i.e.*, loaves of the finest wheaten flour] should not be made, nor yet any other white loaves, that are called painman, maincherin, &c.; but only three kinds, namely tourte, bis [brown bread known also as trete] and white.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.	
1424	By 3 Henry VI, cap. 2—"Sheep shall not be transported beyond the sea without the king's license." This enactment was not in view of food supplies, but related to the export of wool.
'35	By the 14 Henry VI, cap. 6—"That none disturb an alien that bringeth in victuals to sell in gross or retale," the Act of 1382 was re-enacted.
'50	29 Henry VI. The prices of food and labour as given by Double-day—The True Law of Population (1841)—at this date were as follows:—

<i>Food, &c.</i>	<i>s. d.</i>	<i>Labour.</i>	<i>s. d.</i>
Wheat (plentiful), per qr.	5 4	A weeder, per day.....	— 2
Finest "	8 —	A reaper, with diet	— 3
Oats	2 1	A mower "	— 4
A lean ox	13 —	A labourer, per three days	1 4
A veal or calf	2 —	A sawyer.....	— 6
A lamb	1 —	A tiler	— 6
A goose	— 3	A tiler and man.....	1 2
Eggs, per 100	— 5	A master carpenter	— 10
Red wine, per gallon	1 —	A man and cart	1 8

'68 Edward IV. Robert Brook and Thomas West, Esqres., were at this date clerks of the market, and in a MS. book of theirs there is recorded the following:—

"*Memorandum.*—The baker shall be allowed in every quarter of whete bakyng, as it is provyd by the kyngis bakers, as it shal appere hereafter.

"*First*, he shal have 4*d.* and all his branne to avauntage; and two lofis for fornage; and three halfpence for three servauntes; and for coles *ob.* and for yeste *ob.* and for salt *ob.*, and for wood 3*d.*, and for bultelle [bolting the meal] *ob.*, and for the sealing *ob.*, and for candeles, q. summ 11*d.* q. beside his branne, and the two loves.

"This is proved by the statutis: and also by an Acte in William Conquerours tyme: and the tyme of Henry the III; and in the tyme of King Edward the III: and never reversid sithen.

"*Memorandum*, it is ordayned bi statute, that alle manner of bakers dwelling out of cities and burgh townes, as bakers dwelling in villagis and upon Londe, their peny lof, what corne so ever it be, be it white or browne, it shall wey more than the peny lof in the town or city by *x s.*, and the halfpenny lof by *v s.* because they bere not suche chargis as bakers in the cities doon, and townes. And yet they shal kepe the assize truly according unto the statute upon payne of 6*s.* 8*d.* for his offence, as often as he doth the contrary, beside his mersement for brekyng of the size, if his lof wey nat as they do in cities and burgh townes. And in likewise shal the ferthing lof wey after the statute."

Then follow the "assize of brede" as follows:—

"This is the assize of al maner of brede of whete, and of what eting corne soever it be. It shal be weied after the ferthing wastell; for the symonell shal weye less than the wastel than 2*s.* because of the sething.

"The ferthing white lofe, called the cocket, shal wey more than the wastell by 2*s.* because of the bakyng.

"The halfpeny wheten lofe, that is to say, the halfpeny cribel lofe, shal wey three ferthing white lofys.

"The lofe of al maner of corn, that is to say the horse lof, shal wey two halfpeny white lofis."

In this same book there was also contained the assize for other branches of trade connected with food of the people: thus for the "myller," the "brewer," the "bocher," the "fyssher," &c.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.
1472 It was also the custom at this early period to have an assise of liquors, embraced under the general term "Victuals," concerning which we learn many details from the 20 Edward IV, cap. 8—"An Act for annulling of Letters Patents made to Searchers and Surveyors of Victuals," enacted this year, and which recites as follows :

"*Item*—Whereas the governors, that is to say mayors, bailiffs, and other like governors of every city, borough and town of substance within this realm of England, for the most parts have courts of leets and views of frankpledge, holden yearly within the same cities, boroughs, and towns, and surveying of all victuals there, and correction and punishment of the offenders and breakers of this assise of the same, to be presented and amerced if any default be found in the said courts, or by their surveying, which by reason ought not to be contraried, nor the victuallers there by the law ought to be surcharged or oppressed ; (2) as now, and of late, divers persons daily intending their singular avail and profit, to oppress the said victuallers, and to enter and break the liberty of divers places in this realm, having franchises and surveying of all victuallers, and correction of the same, have purchased letters patent of our sovereign lord the king, to be surveyors and correctors of all such victuallers within divers cities, boroughs, and other places of this realm of England, as of ale, beer, wine, and other such victuals, by which pretence and unlawful office, they do commit divers and many extortions and oppressions, amongst the king's liege people, taking of them unlawfully divers great fines and ransoms to the danger of the king's liege people, and also wrongful derogation of the liberties and franchises of divers of the said cities, boroughs, and towns."

It was therefore enacted that all letters patent granted to persons for searching or surveying of victuals should be void, and the chief governors of cities, towns, &c., appointed to search and survey the same. The other Acts and authorities on this branch of the inquiry, which we do not intend to pursue in detail here, are:—4 Inst., 262 ; 51 Henry III, statute 6 ; 12 Edward II. statute 1, cap. 6 ; 10 Edward III, statute 3 ; 23 Edward III, cap. 6 ; 31 Edward III, statute 1, cap. 10 ; 6 Richard II, cap. 10 ; 13 Richard II, statute 1, cap. 8 ; 1 Henry IV, cap. 17 ; 3 Henry VIII, cap. 8 ; 25 Henry VIII, cap. 2 ; 2 and 3 Edward VI, cap. 15 ; 22 and 23 Car. II, cap. 19 ; 31 George II, cap. 28 ; and 32 George II, cap. 1.

1500 15 Henry VII. The prices of food and labour this year are recorded as follows :—

<i>Food.</i>		<i>s. d.</i>	<i>Labour.</i>		<i>s. d.</i>
Wheat, per quarter	.....	7 4	A woman labourer, per day	—	2½
Malt	.....	2 8	A carter, per day	.....	— 3
A cow	.....	8 —	A reaper	.....	— 3
A lamb	.....	1 —	A mower	.....	— 4
A pig	.....	— 5	A carpenter, with diet per day	.....	— 6
Carcass of a neat	.....	— 10	A plumber	.....	— 6
Eggs per 100	.....	— 9	A tiler or joiner	.....	— 6
Wine, per gallon	.....	1 —	Lesser crafts, without diet	} — 6	
„	.....	— 8	per day		

'31 By 22 Henry VIII, cap. 7, whoever should convey any horses, geldings, mares, or *sheep*, to any parts beyond the sea, without the king's license, save for the victualling of *Calais*, was to forfeit 40s. for every poll. (See 1562.)

'32 By the 23 Henry VIII, cap. 3, "An Acte for Fleshe to be sold by weight," it was enacted that any person who should sell by himself or any others, the carcasses of beefs, pork, mutton, or veal, or any part or parcel thereof after the 1st August then next ensuing, should sell the same by lawful weight, called *haberdupois*, and none other-

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D. 1532 ...	<p>wise; the said flesh to be cut out in reasonable pieces, according to the request of the buyer, in like fashion as afore that time was used, without fraud or covin; and that every person who by himself or any other should sell any flesh of the said carcases, should have with him where he should make sale of the said flesh, sufficient beam scales and weights, sealed, called <i>haberdupois</i>, for true serving of the buyers. And that after the said 1st day of August <i>no person should take, or cause to be taken for any pound weight of flesh of the carcases of beef or pork, above the price of one half penny and half farthing upon pain of forfeiting 3s. 4d.</i> "Provyded always, that the heedes, neckes, inwardes, purtynces, legges, nor fete shall not be counted no parte of the carcase afore said, but such be solde for a lower price." The lord chancellor and justice of assise, justice of peace, mayors, bailiffs, &c., might fix lower prices, and special powers for "towns and Universities of Oxforde and Cambridge."</p>
'33 ...	<p>In this year there were three enactments bearing upon food supplies, viz. :—</p> <ol style="list-style-type: none"> 1. The 25 Henry VIII, cap. 1, which enacted that the governors of cities and market towns upon complaint to them made of any butcher refusing to sell victual by weight according to the statute 24 Henry VIII, cap. 3, might commit the offender to ward until he had paid all penalties limited by the said statute; and might sell or cause to be sold for money all such victual for ready money to be delivered to the owner, and if any grazier, farmer, breeder, drover, refuse to sell his fat cattle to a butcher upon such reasonable price as he may retail it at the price assessed by the statute, the justices of the peace, mayors, and governors, should cause indifferent persons to set the prices of the same, which if the owner refuse to accept them, the same justices, &c., should bind him to appear the next term in the Star Chamber, to be punished as the king's counsel should think good. 2. The 25 Henry VIII, cap. 2, <i>see</i> Table XII. 3. The 25 Henry VIII, cap. 13—"Concerning the number of sheep one should keep," the preamble of which is very remarkable : <i>"Forasmuch as divers and sundry persons of the king's subjects of this realm, to whom God of his goodness hath disposed great plenty and abundance of movable substance, now of late within few years have daily studied, practised, and invented ways and means how they might accumulate and gather together, into few hands, as well as great multitudes of farms as great plenty of cattle, and in special sheep, putting such lands as they can get to pasture, and not to tillage, whereby they have not only pulled down churches and towns, and enhanced the old rates of the rents of the possessions of this realm, or else brought it to such excessive fines, that no poor man is able to meddle with it, but also have raised and enhanced the prices of all manner of corn, cattle, wood, pigs, geese, hens, chickens, eggs, and such other, almost double above the prices which have been accustomed; by reason whereof a marvellous multitude and number of the people of this realm be not able to provide meat, drink, and clothes necessary for themselves, their wives and children, but be so discouraged with misery and poverty, that they fall daily to theft, robbery, and other inconveniencies, or pitifully die for hunger and cold, and as it is thought by the king's most humble and loving subjects, that one of the greatest occasions that moveth and provoketh those greedy and covetous people so to accumulate and keep in their lands such great portions and parts of the grounds and lands of this realm from the occupying of the poor husbandmen, and so to use it in pasture and not in tillage, is only the great profit that cometh of sheep, which use be come to a few person's hands of this realm in respect of the whole number of the king's subjects</i>

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1533

that some have 24,000, some 20,000, some 10,000, some 6,000, some 5,000, and some more, and some less, by *the which a good sheep for victual, that are accustomed to be sold for 2s. 4d. or 3s. at the most, is now sold for 6s., or 5s., or 4s. at the least; and a stone of clothing wool, that in some shires of this realm was accustomed to be sold for 18 pence, or 20 pence, is now sold for 4s., or 3s. 4d. at the least; and in some countries [counties], where it hath been sold for 2s. 4d., or 2s. 8d., or 3s. at the most, it is now sold for 5s., or 4s. at least, and so are raised in every part of this realm; which things thus used be principally to the high displeasure of Almighty God, to the decay of the hospitality of this realm, to the diminishing of the king's people, and to the let of the cloth making, whereby many poor people have been accustomed to be set on work; and in conclusion, if remedy be not found, it may turn to the utter destruction and desolation of this realm, which God defend."*

Wherefore it was enacted of the king's "most gracious and godly disposition, that from and after the feast of St. Michael the Archangel, 1535, no man should keep, occupy, or have in his possession above 2,000 sheep at one time, upon penalty of 3s. 4d. per head for all beyond; lambs under one year old not to be counted as sheep; grace of one year given as to sheep coming by executorship, or marriage; with special provisions as to sheep bequeathed by will to a child under age."

Then follow a series of clauses which revoke a good deal of the foregoing, viz., that the owner of land may on his inheritance keep as many sheep as he will; it was only the farmer who was to be so limited to 2,000, and even he might have additional sheep for the maintenance of his household. And inasmuch as the number of 100 sheep in every county be not alike, 6 score were to be counted 100. No man was to take above two farms.

'35 By the 27 Henry VIII, cap. 9, butchers were permitted to sell flesh for two years, as they did before the making of the statutes 24 Henry VIII, cap. 3 (1532), and 25 Henry VIII, cap. 1, and notwithstanding these enactments.

'36 By 28 Henry VIII, cap. 14—"For prices of wines," it was enacted "That no person or persons shall sell any *Gascoin, Geryen, or French* wines above viij*d.* the gallon, that is to say, a penny the pint, twopence the quart, fourpence the bottle, and eightpence the gallon, upon pain of forfeiture for every pint sold above that price if iv*d.* . . . And that no Malmesys, Romneys, sacks, nor other local wines shall be sold by retail above xij*d.* the gallon, vi*d.* the pottle, ij*d.* the quart, i*d.* ob. the pint, upon pain, &c." The prices of wines sold in the gross were to be assessed by the king's great officers, viz., the Lord Chancellor, Lord Treasurer, and Lord President of the Council, &c.

'41 By 33 Henry VIII, cap. 11, "An Act for butchers to sell at their liberty by weight or otherwise," it is recited at the instance of the masters and fellowship of butchers, and of other butchers within the realm, that if the Acts of 1533 and 1535 "should hereafter be put in execution, and your said orators compelled to sell flesh by weight . . . should be to the utter undoing of your said orators for ever." Whereupon it was enacted that it might "from thenceforth be lawful unto all your said subjects to sell their victuals from time to time by themselves, their wives and servants, to all manner of persons that will buy the same in like manner and form as they might have done before the making of the said estatutes or any of them."

'42-43 The 34 and 35 Henry VIII, cap. 9—"An Act for the preservation of the River Severn," recites:—

"Whereas divers persons, as well as inhabitants, farmers and dwellers near unto the stream of *Severn*, and unto the creeks and

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1542-43

piles of the same, from *Kingrod* upwards toward the city and town of *Gocester*, conveyeth and carrieth grain and corn out of the realm of England, unto the parts beyond the sea where grains are very dear, and now of late time have made picards, and other great boats, with foremasts, of the burthen of 15 tun, and some to 36 tun; and by reason thereof, wheat, rye, beans, barley, malt, and other kinds of grain by stealth, are conveyed into the utter parts beyond the sea, so that thereby the king's majesty is not only deceived of his subsidy and custom for the same, but it causeth at such times wheat, grain and other kind of corn as is aforesaid, to be at high prices; and by the same means the inhabitants within the said city or town of *Bristol* are often and sundry times destitute and scant, may have grain or corn to serve the king's obedient subjects there dwelling and inhabiting; and also by reason of having the said great boats or vessels, oftentimes divers ships, as well of the parts beyond the sea, or other of *English* ships lying in *Kingrod* and *Hungrad* (being ports or havens of the city or town of *Bristol* aforesaid distant 5 miles or thereabouts from the said town of *Bristol*) awaiting and tarrying there the coming of the said boats with corn and grain down *Severn*, who there discharge the grain and corn abroad the said ships at *Kingrod*, by reason whereof the said ships and other vessels there tarrying for the receipt of the said grain and corn, do then cast out their ballast of stones, and other robe of ballast of their said ships and vessels into the said roads and havens, to the great destruction, and in continuance to the utter undoing of the said roads and havens, in that the mouth and whole channel of the said haven is so heaped and quarried with stones and robe of ballast of the ships and boats there arriving, that great ships which use the course of merchandise to the said town of *Bristol* from the parts beyond the sea, and from the town laden with merchandise unto the utter parts, may scantily or safely come in unto the king's said port and town of *Bristol* and the river of the same, and so from the said port and town of *Bristol* unto the said *Severn*, without great danger and peril; and by that means ships of great burthen are like to be destroyed and utterly to be cast away; and if redress be not the sooner had therein, it will be to the utter destruction of the haven and port of the said town of *Bristol*, which said town of *Bristol* is chiefly maintained by course of merchandise."

It was therefore enacted (in addition to penalty for casting ballast) that none should load any corn in any vessel by the water of the *Severn* to transport until the same should be submitted to the king's "customers" at *Bristol* there to pay the export duties, and then only to carry so much grain as his license permitted, upon pain of forfeiture of vessel.

48 By a statute enacted this year, we learn that trades-unionism is not a new feature—that is new in our own time: this measure is the 2 and 3 Edward VI, cap. 15—"The Bill of conspiracies of victuallers and craftsmen," which recites:—

"Forasmuch as of late divers sellers of victuals, not contented with moderate and reasonable gain, but minded to have and to take for their victuals so much as list them, have conspired and covenanted together to sell their victuals at unreasonable prices; (2) and likewise artificers, handicraftmen and labourers have made their confederalls and promises, and have sworn mutual oaths, not only that they should not meddle one with another's and perform and finish that another hath begun, but also to constitute and appoint how much work they shall do in a-day, and what hours and times they shall work, contrary to the laws and statutes of the realm, and to the great hurt and impoverishment of the king's majesty's subjects."

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.
1548

For reformation whereof, it was enacted—"That if any butchers, brewers, bakers, poulterers, cooks, costermongers or fruiterers, shall at any time from and after the 1st day of March next coming, conspire, covenant, promise, or make any oaths, that they shall not sell their victuals but at certain prices . . . shall forfeit for the first offence 1*ol.* to the king's highness, or twenty days imprisonment on bread and water; and for the second offence 2*ol.*, or the pillory; and for the third offence 4*ol.*, and the pillory, with loss of one of his ears, and also shall at all times after that be taken as a man infamous, and his saying, depositions on oath, not to be credited at any time in matters of judgment." If any such conspiracy were entered into by the Company of Victuallers, then their corporation to be dissolved.

'50 3 Edward VI. Prices were as follows:—

<i>Food.</i>	<i>£</i>	<i>s.</i>	<i>d.</i>	<i>Labour.</i>	<i>s.</i>	<i>d.</i>
Wheat, per quarter	-	14	8	A binder and shearer, } with diet, per day	-	2
„ (scarcity), per } quarter	1	-	-	A mower's <i>statute</i> wages, } with diet, per day	-	4
Barley (scarcity), per } quarter	-	5	0	A mower, without diet	-	10
A steer, fat	1	5	-	A shearer, without diet	-	5
Mutton, per carcass	-	5	8	A journeyman tailor, with } diet	-	4
A wedder	-	4	4			

'52 The 5 and 6 Edward VI, cap. 14, "An Act against Regrators, Fore-stallers, and Ingrossers," and which will be noticed in detail in Table No. XII, contained the following:—

VIII. And it is also further enacted, "That if any person or persons after the said 1st day of May next coming, having sufficient corn and grain for the provision of his or their own house or houses, and sowing of their grounds for one year, do buy any corn in any fair or market, for the change of his or their seed, and do not bring to the same fair or market the same day so much corn, as he shall fortune to buy for his seed, and sell the same, if he can, as the price of corn their goeth in the said market or fair, that then every such person or persons so buying corn for seed, shall forfeit and lose the double value of the corn so bought." . . .

Also this:—

XII. "Provided always . . . That it shall be lawful to every person or persons which shall be assigned and allowed by three justices of the peace of the county where he shall thereunto, by (otherwise than by forestalling) corn, grain, or cattle, *to be transported or carried by water from any port or place within this realm of Wales, unto any other port or place within the said realm or dominions*, if he or they shall without fraud or covin ship or embark within three score [other editions have it forty] days next after he or they shall have bought the same, or taken covenant or promise for the buying thereof, and with such expedition and diligence as wind and weather will serve, to carry and transport the same to such port or place as his or their cockets shall declare, and there to disembark, unlade and sell the same, and *do bring a true certificate thereof from one justice of the peace of the county, or mayor or bailiff of the town corporate, where the same shall be unladen, and also of the customer of the port where such unlading shall be, of the place or day where the said corn or cattle shall be disembarked, unladen and sold, to be directed unto the customer and comptroller of the port, where the same were embarked; anything mentioned in this Act to the contrary notwithstanding.*"

This Act was made perpetual by 13 Elizabeth, cap. 25.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

- 1562 In the 5 Elizabeth, cap. 5, "An Act touching Politick Constitutions for the maintenance of the Navy," but which was in reality an Act to encourage fisheries and the mercantile marine, in view probably of drafting young fishermen into the royal navy, there was contained the following clauses:
- XIV. "And for increase of provision of fish by the more usual and common entering thereof, be it further enacted by the authority aforesaid, that from the feast of St. Michael the Archangel, in the year of our Lord God, 1564, *every Wednesday, in every week, throughout the year, which heretofore hath not been by the law and customs of this realm used and observed as a fishday*, and which shall not happen to fall on *Christmas week or Easter week*, shall be hereafter observed and kept, *as the Saturday in every week, be or ought to be*. (2) *And that no manner of person may eat any flesh on the same day, otherwise than ought to be upon the common Saturday.*"
- Under pain of the penalties therein provided, see further hereon, 1593.
- '65 There was enacted, 8 Elizabeth, cap. 3—"An Act against carrying over seas, Rams, Lambs, or Sheep, alive." This was probably in the interest of the woollen trade.
- '70 By 13 Elizabeth, cap. 13—"An Act for the increase of Tillage, and maintenance of the Navy," it was set forth when corn might be exported and when not. It might be exported out of certain ports, in certain specified classes of ships, when the prices be allowed "reasonable." Before any grain was transported under this Act, the justices of locality from which export was proposed to be made had to be notified to the queen or her council, and then allowed or otherwise. The custom to be paid for grain transported under this Act was specified. The queen by proclamation might prohibit export.
- '72 Sir Lionel Ducket, mayor. This year there was "imprinted on a sheet, by J. Day, the city printer," a tariff of the prices of poultry, with a preface as follows:
- "Forasmuch as through the greedie couetousnesse of the poulters, the pricee of all poultrie wares within the citie and the liberties thereof are growen to be excessive and unreasonable, not only to the perillous example of all manner of people throughout the whole realme that do sell poultrie wares, but also to the great charges of all noblemen, men of worship, and gentlemen, that do keepe any houses within this citie, or neere the same;
- "For reformation whereof, it is ordered by my lord maior and court of aldermen, that all maner of persons, as well poulterers as others, that shall after this present 5th day of April, in the xiiij year of the queenes maiesties reign, sell any poultry wares within this citie and the liberties thereof, shall observe and keep these prices following."
- Then follows detailed list of prices to be charged in "shops" and in the "markets."
- '85 By the 27 Elizabeth, cap. 18, so much of the Statute 5 Elizabeth, cap. 5 (1562), as concerneth the eating of fish, and restraineth the eating of flesh upon Wednesdays, was repealed. "Sea-fish might be sold any day in the week saving Sunday. Victuallers were to issue no flesh in Lent, nor upon *Fridays or Saturdays.*"
- '86 In view of preventing a dearth in the city of London, certain of the city companies "were, by the lord maior's means, to buy each of them a quantity of corn, and to lay it up in the Bridge-House."—Stow.
- '93 By 35 Elizabeth, cap. 7—"An Act for reviving, continuing, explaining, and perfecting of divers statutes"—this Act of 1562 was amended as follows:—

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1593

"XXII. Provided also, and be it further enacted by the authority aforesaid, that every person eating any flesh upon any fish-days, contrary to the Form of the said statute made for the maintenance of the navy [1562], shall forfeit only 20s., or else suffer only one month's close imprisonment without bail or mainprize; and every person or persons within whose house any such offence shall be done, and being privy or knowing thereof, and not effectually publishing or disclosing the same to some public officer, having authority to punish the same, for every such offence to forfeit only 13s. 4d., anything in the said statute contained to the contrary notwithstanding."

'94

"And such a dear year was that of 1594, Sir John Spencer, maior, who therefore (it being now winter time) called upon the companies, viz., those of them that had not laid in their proportion, to do it within so many days; corn being then brought in from foreign parts."—Stow.

'95

Reign of Elizabeth.—There was published by John Powel, sometime clerk of the market: *The boke of the assyse of breade, &c.*, "corrected and enlarged." There were many other editions of this work, but we propose here to quote from the edition of this date, which we believe contains the text as confirmed by the Lords of the Privy Council ("Christoph. Hatton, Canc.") about this period as follows:—

"Ancient Laws, Customs and Good Ordinances, set down for Bakers, in making, sizing, and selling all sorts of Lawful Bread, which by the Laws are vendible unto the Queens Subjects in the Commonwealth retailing the same."

"First—That no manner of person or persons shall keep a common bakehouse in cities and corporative towns, but such persons as have been apprenticed into the same mystery and brought up therein for the space of seven years, or else otherwise skilful in the good making and true sizing of all sorts of bread; and shall put his own mark or seal upon all sorts of his man's bread, which he or they shall make or sell as before is mentioned.

"Item—That no baker or any other persons do make, bake, utter and sell any kinds or sorts of bread in the commonwealth, but such which the statutes and antient ordinances of this realm do allow him to bake and sell: that is to say, they shall bake and sell symnel bread, and wastel, white, wheaten, household, and horse bread; and none other kinds of bread, to put to sale into her Majesty's subjects.

"Item—They must make and bake farthing white bread, halfpenny white, penny white, halfpenny wheaten, penny wheaten bread, penny household, and twopenny household loaves: and none of greater size, upon pain of forfeiture, unto poor people all such great bread, which they or any of them shall make, to sell of greater size (the time of Christmas always excepted).

"Item—They shall not utter and sell to any innholder, or victualler, either in man's bread or horse bread (which shall retail the same) but only 13d. worth for 12d., without any poundage or other advantage.

"Item—They shall sell and deliver unto innholders and victuallers in horse bread but 3 loaves for a penny, and 13 pennyworth for 12d. (as aforesaid), every one of the same three horse loaves weighing the full weight of a penny white loaf, whether wheat be good, cheap, or dear.

"Item—That no baker or other person or persons shall at any time or times hereafter make, utter, or sell by retail, within or without their houses, unto any the queen's subjects, any spice cakes, buns, bisket, or other spice bread (being bread out of size, and not by law allowed), except it be at burials, or upon the Friday before Easter, or at Christmas; upon pain of forfeiture of all such spice bread to the poor.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1595

"Item—Whereas there are in cities and corporative towns, common bakers using the mystery of baking there, and within the same towns, common bakers which come into the market with their bread to be sold, they shall not only bring with them such kinds or sorts of sized bread as the law and ordinances do allow to be made and sold, as aforesaid, but also shall keep and observe this order in the weight of their bread, as hereafter followeth. Because the said foreigners do not bear and pay within the same cities and towns, such scot and lot as the bakers of the same towns do.

"First—The foreigner's halfpenny white loaves shall weigh half an ounce more in every loaf than the bakers of the same towns halfpenny white loaves do.

"Item—Their penny white loaves shall weigh one ounce more to every loaf than the bakers of the same towns penny white loaf do.

"Item—Their halfpenny wheaten loaves shall weigh one ounce in every loaf more than, &c.

"Item—Their penny wheaten loaves shall weigh 2 ounces more than, &c.

"Item—Their penny household loaves, &c.

"Item—Their twopenny household loaves shall weigh 4 ounces more than, &c.

"Provided always, that the clerk of the market of Her Majesty's household, his deputy or deputies, maiors, bailiffs and other officers of cities, corporative towns and liberties, shall look into, have diligent care and respect unto the due performance and execution of these articles, and they shall and may from time to time freely give and distribute all such unlawful bread as shall be hereafter made, and put to sale, being contrary to these articles before mentioned, unto poor prisoners, or any other poor people. Willing and requiring all justices of peace, constables, bailiffs, and other officers to be aiding, assisting, and helping all the aforesaid officers in the due execution thereof, as they will answer to the contrary at their perils."

'98 There was published John Stow's *Surveys of the Cities of London and Westminster*, and in Book V. will be found chapter xxv, with the following heading: "Antient Assize and weight of bread: an Ordinance for it, according to the price of wheat. Old Orders for Bakers. How the Assize of Bread was made each year. The Bakers Halimotes [? Hallmotes]. Assay of Bread according to the Regale of England. Laws and Charges for Bakers. Miller, Baker, Brewer, Butcher, Fisher, Cook, Innholder, Taverer, Tallow-chandler, Spicer, Weaver, Tanner, Cordwayner, Carrier, White Tawyer, Mercer, &c., Foretallers. All their Assizes. Standard for Weights adjusted. Measure for Seacoal and other things measurable upon the Thames." Wherein will be found much that is of interest on the questions treated of in this article. We have here quoted from the edition of 1713, which had passed through many hands after its original author.

1601 By 48 Elizabeth, cap. 7, justices of the peace were directed to compel those who cast down growing corn to make satisfaction.

'07 James I. The lord mayor of London addressed a letter (dated 19th March) to the lords of the council, reporting that on account of the exceeding high price of corn, and the scarcity, the bakers were scarcely able to keep 11 ounces weight in the wheaten penny loaf, and requesting that license might be granted to those who will bring corn to the port of London, and that if such quantities as should be brought in were not vended or uttered there, it might be lawful for them to ship the same out again without paying customs.

'15 About this date the said J. Powel, clerk of the market, reported to James I and his council that "divers bakers and other persons taking upon them the mystery of baking and uttering of bread unto the king's majesty's subjects in the commonwealth, for their own private

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.
1615 luere and commodity, did not only make and sell to the subjects, breads of odd sizes, made by their own inventions, but also divers kinds and sorts of bread; which were both repugnant to the laws and good ordinances of the realm, and likewise hurtful to the commonwealth." Further orders and regulations were thereupon issued, and the master and wardens of the company of bakers were especially ordered "to look into and have diligent care and respect unto the due performance of these articles."

'16 The price of indoor labour at this date is indicated by the following tailor's bill: For making a suit of clothes, 4s.; for making a cloak 1s. 6d.; for making a morning gown, 1s. 8d.; for making a black gown, 1s. 6d.

'23 See Table X, this date, as to relaxation of prohibitions against forestalling.

'27 By 3 Car. I, cap. 4 (5)—"An Act for continuance and repeal of divers statutes"—the 3 and 4 Edward VI, cap. 19 and 21; the 5 Elizabeth, cap. 5; the 21 James I, cap. 22; and other Acts mentioned in this and other tables in this paper were continued.

'32 The expense of living in the metropolis is said to have increased considerably about this time. The poor's rates in the country also went up. These incidents were attributed to the nobility and gentry living constantly with their families in London. In the following year several regulations were made by the Star Chamber for bringing down the prices of provisions and of horse meat in London and Westminster. The wretchedness of the poor was in some degree ascribed to the fraudulent practices of bakers. Ordinaries were limited to 2s. a-head for dinner (wine included), and to 8d. a-head for a servant attending his master. Respecting innkeepers, it is said that, "considering the present price of hay and oats, 6d. a night for hay and stable-room, and 6d. a peck for oats were sufficient, without anything being allowed for litter."—RYM FÆD., xix, 476.

'50 Commonwealth. The prices of food and labour had ranged during the half-century now ending as follows:—

<i>Food.</i>	£ s. d.	<i>Labour.</i>	s. d.
Wheat, per quarter.....	1 14 -	Labourers, ordinary, per day	- 10
"	2 - -	Women shearers.....	1 2
		Reapers	1 4
A fat ox	9 10 -	Journeymen artisans.....	1 2
		Plumbers.....	1 4
A veal	- 17 -	Glaziers	1 4
		Millwrights.....	1 6
		Collar-makers	1 6
Mutton, per stone of 8lbs. -	2 3	Armourers	1 6
		Knackers	1 6
A lamb	- 6 8	Master mason	1 6
		A mason with diet.....	1 -
Tongues, cured, per doz. -	12 -	Apprentice masons with } diet	- 10
Chine of beef	- 18 -	Apprentices with diet	- 4

'69 The court of aldermen of the city of London ordered an assise of bread to be held.

'70 By 22 Charles II, cap. 8—"An Act for ascertaining the measures of corne and salt"—it is recited that there was a great variety of measures existing in the "several countyes, cittyes, burroughes, ports, and other places of this realme for the measureing, buying, and selling of all sorts of graine, salt and other commodities usually bought and sould by the bushell, to the great defrauding and oppressing of the people, contrary to the great charter," &c. It is therefore enacted that the "Winchester measure" only be used, under a penalty of 40s.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.		And to the end that there might be “a just and certaine measure,” so as to determine all controversies, there was to be affixed before the 29th of September this year within the cities, borough and market towns, “one measure of brasse provided and chained in the market place upon paine of forfeit and loose for every person soe neglecting respectively the summe of 5 <i>l</i> .” Constables to search for other measures and to break them. (See 1391).
1670	....	By 22 and 23 Car. II, cap. 12 (2), corn, &c., was not to be sold without measuring.
1701	....	By 1 Anne, cap. 26—“An Act for the relief of the masters of hoys and other vessels carrying corn and other inland provisions within the port of London”—it is recited that certain officers of Her Majesty’s customs had for their own profit and lucre required and exacted great fees for transires and coquets, “to the great discouragement of the county farmers, and oppression of the said hoymen,” all of which was ordered to be discontinued. The rights of the ports of <i>Sandwich</i> and <i>Ipswich</i> [described in the Act as being located in the counties of <i>Kent</i> and <i>Essex</i> !] reserved.
’09	....	By another Act of the same year, viz., 8 Anne, cap. 18—“An Act to regulate the Price and Assize of Bread”—it is recited:— “Whereas by the statute made in the one-and-fiftieth year of the reign of King Henry the Third [intituled <i>Assisa Panis et Cervisie</i>], provision was made, amongst other things, for settling the assise of bread; but the said statute is expressed in terms so obscure and impracticable in these times that many doubts and difficulties have arisen, and daily do arise, in the construction thereof, whereby little or no observance hath in many places been made, either of the due assise, or reasonable price of bread; and covetous and evil-disposed persons, taking advantage of the same, have, for their own gain and lucre, deceived and oppressed Her Majesty’s subjects, and more especially the poorer sort of people; for remedy whereof for the future, and that a plain and constant rule and method may henceforward be duly observed and kept, in the making and assising of the several sorts of bread made for sale be it enacted, &c.”
		So much of the said statute as relates to the assise of bread is then repealed, and it was enacted that after 1st May, 1710, the lord mayor and aldermen of London, and the mayor and bailiffs, aldermen or other chief magistrates of other cities and towns, and the justices of the peace in places where there was no mayor, &c., should set the assise and weight of all sorts of bread, having respect to the price of grain, &c., no person to sell bread other than such as should be licensed by the lord mayor, and other authorities named. Bread to be made according to a scale in the Act, regulating weight according to quality of the flour and the price of corn. All bread to be marked. Bakehouses might be searched, &c.
		This Act was amended and continued by various Acts at different periods, as will be shown in what follows.
’14	....	There was enacted 1 George I (statute 2), cap. 26—“An Act for continuing several laws therein mentioned, relating to coals, hemp and flax, Irish and Scotch linen, and the assise of Bread; and for giving power to adjourn the quarter sessions for the county of Anglesea, for the purposes therein mentioned.” After 1st September, 1715, bakers making bread deficient in weight should for every ounce forfeit 5 <i>s</i> ., for lesser deficiencies 2 <i>s</i> . 6 <i>d</i> .
’18	....	By 5 George I, cap. 25—“An Act for continuing the Act made in the 8th year of the late Queen Anne, to regulate the price and assise of Bread; and for continuing the Act made in the twelfth year of His late Majesty’s reign, for the better encouragement of the making of sail cloth in Great Britain”—the Act of Anne, as amended, continued for five years.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

- 1723 ... By 10 George I, cap. 17—"An Act for continuing Acts for preventing theft and rapine upon the northern borders of England; and for better regulation of pilots; and for regulating the price and assize of Bread; and for better encouraging of the making of sail-cloth in Great Britain"—the Act of Anne, as amended, was extended for seven years.
- '30 ... By 3 George II, cap. 19—"An Act for continuing and amending an Act for regulating the price and assize of Bread"—&c., which recites the Act of 1709, "And whereas the said Act having been by subsequent Acts further continued, was found very useful and beneficial, but the same is now near expiring." It was now continued to 25th March, 1738.
- "II. And whereas the court of lord mayor and aldermen of the city of London and some other magistrates, have thought fit to set down and ascertain the price for which half-peck and quartern loaves ought to be sold; which prices the bakers have sometimes complied with, but at other times have refused to do so, to the deceit and oppression of His Majesty's subjects, especially of the poorer sort of people. And whereas some doubts have arisen touching the penalty they have incurred for such their refusal, for remedy whereof be it enacted, that from and after the 25th day of June, 1730, if any baker or other person or persons baking or making bread for sale, or exposing bread to sale, *shall sell any peck, half-peck, or quartern loaf or loaves at any greater or higher price than shall be set and ascertained by the said court of lord mayor and aldermen, or by the lord mayor of the said city for the time being, by order of the said court or by the mayor, bailiffs, aldermen, or chief magistrate for the time being of any other city, town corporate or borough, or by any two or more justices of the peace in such towns and places where there shall be no such mayor, bailiffs, aldermen, or chief magistrate, he, she, or they so doing, being thereof lawfully convicted, shall for every such offence forfeit the sum of 10s.; the said forfeiture or forfeitures to be given to the informer or informers, &c.*
- "III. Provided always, that before any reduction is made in the assize of bread by the court of lord mayor and aldermen, a copy of the prices delivered in by the meal weighers for the said city for the time being, shall be left at the common hall of the Bakers Company by the space of twelve hours before any such reduction, to the intent that the said company shall have an opportunity to be heard thereupon before the said court."
- '39 ... By 12 George II, cap. 13—"An Act for continuing the Act made in the eighth year of the reign of Her Majesty Queen Anne, to regulate the price and assize of Bread, &c."—which recites, "Whereas the laws hereinafter mentioned (which have by experience been found useful and beneficial) are near expiring," and the Act of 1709, as amended by that of 1714, is continued, with amendments as follows:—
- "II. And whereas several doubts and difficulties have arisen touching the powers of the magistrates of burghs and corporate towns, and of the powers of the justices of the peace in such other towns and divisions where no magistrates are, in that part of Great Britain called *Scotland*, touching the regulating of the price and assize of bread; be it therefore declared and enacted by the authority aforesaid that the said Act of [1719 as amended] . . . does extend, and shall be with all the powers, provisions, clauses and declarations, extended to that part of Great Britain called *Scotland*."
- '42 ... In the *Dublin News Letter* of 8th May this year, was the following regarding the prices of food in *Ireland*: "We hear from Derry that provisions are as cheap there as they were ever known; there being 20 lbs. of meal for 9d., 20 oz. of butter for 2½d., 18 eggs for 1d., and potatoes for 3d. a-bushel."

TABLE IX.—Restrictions on the Price of Food—Contd.

A.D. 1749	By 22 George II, cap. 49—"An Act to continue several laws and for regulating the price and assise of Bread," and which continues the Act of 1709 (as amended by the Acts already reviewed) to 14th June, 1757, and proceeds :
	<p>"XXI. And whereas it is often very difficult for the magistrate or justice, or justices of the peace before whom bread is complained of, to know under what denominations the bread ought to be weighed, pursuant to the directions of the said Acts" "Be it enacted That every common baker, and every person who shall make bread or bake for sale, or any ways expose to sale, any sort of bread whatever, shall from and after the 1st day of August which shall be in the year of our Lord 1749, fairly imprint or mark, or cause to be imprinted or marked on every loaf so by him made or exposed for sale, the letters hereinafter-mentioned (that is to say), upon every loaf exposed to sale as wheaten bread, a large Roman W H, and upon every loaf exposed to sale of household bread, a large Roman H, and every person selling or exposing to sale not marked as aforesaid, shall forfeit and pay the sum of 20s. to the informer. . . ."</p> <p>"Provided always that nothing in this Act was to extend, or be construed to extend, to any sort of bread but that mentioned in the said Acts of 1709 and the amending Acts."</p>
'57	<p>There was enacted 31 George II, cap. 25—"An Act for establishing a free market for the sale of Corn and Grain within the City and Liberty of Westminster"—which recites, "Whereas the establishment of a free market for the sale of corn and grain within the city or liberty of Westminster, would be very advantageous to the inhabitants of the said city and liberty, as well as adjacent parts; but such market cannot be established without the aid of parliament," there was to be a toll paid to the trustees of the said market of 1d. for every sack of corn, grain, malt, meal, or flour, and ½d. for every bushel of seed.</p> <p>[Note. At this date all the other markets were under greater or less restrictions.]</p> <p>The same year there was enacted 31 George II, cap. 29—"An Act for the due making of Bread; and to regulate the price and assise thereof; and to punish persons who shall adulterate Meal, Flour, or Bread"—which recites (<i>inter alia</i>): "And whereas it is expedient to reduce into one Act the several laws now in force relating to the due making, and to the price and assise of bread, and to make some alterations in, and amendments to the same." From 29th September, 1758, the Acts of Henry III and of Anne were repealed; and there was enacted a "General Ordinance for setting an assise and price of bread." The assise was to be regulated by the <i>price grain, meal, and flour bore in the market</i> (with detailed machinery for ascertaining the same), and "the profit to be allowed to the baker." All this was set out in tables appended to the Act, supplemented by regulations, worked out with the most elaborate care, and there was included the following :</p> <p>"XLV. Provided likewise, That neither this Act, nor anything herein contained, shall extend or be construed to extend to prejudice the ancient right or custom of the two universities of Oxford or Cambridge, or either of them, or of their or either of their clerks of the Market, or to practice within the several jurisdictions of the said Universities, or either of them used, to set, ascertain and appoint the assise and weight of all sorts of bread to be sold or exposed to sale within their several jurisdictions, but that they, and every of them, shall weigh severally and respectively, from time to time, as there shall be occasion, set, ascertain and appoint within their several and respective jurisdictions the assise and weight of all sorts of bread to be sold or exposed to sale by any baker or other person whatsoever, within the limits of their several jurisdictions, and shall</p>

TABLE IX.—*Restrictions on the Price of Food—Contd.*A.D.
1757

and may require and punish the breach thereof, as fully and freely in all respects as they used to do, and as if this Act had never been made; anything herein contained to the contrary thereof notwithstanding." See Table XII (1555).

Under section 25 of this Act, magistrates might enter premises of suspected miller or baker and search for adulterated meal.

'58

By 32 George II, cap. 18—"An Act to [*inter alia*] . . . appropriate certain penalties mentioned in an Act made in the last session of parliament for the due making of Bread; and to regulate the price and assise thereof; and to punish persons who shall adulterate Meal, Flour, or Bread"—one-half of the penalty went to the prosecutor; the other half as the magistrate should direct.

There was enacted 32 George II, cap. 61—"An Act for discharging the inhabitants of the town of *Manchester*, in the county palatine of Lancaster, from the custom of grinding their corn and grain, except malt, at certain water corn mills in the said town, called the *School Mills*; and for making proper recompense to the feoffees of such mills." This although contained in the schedule of the statute at large as a public Act, is regarded as a local and private Act, and its title alone is printed.

'62

By 3 George III, cap. 6—"An Act for explaining and amending an Act made in the thirty-first year of the reign of his late Majesty, George II, intituled an Act, &c.; so far as the same relates to that part of Great Britain called *Scotland*; and for rendering the said Act more effectual in that part of the United Kingdom." The regulations of procedure were very minute, for instance, the magistrates and justices were to inquire into and take proof of the prices which the several sorts of bread, corn, meal, and flour, sold for in the public markets; and where there were no public markets, then to take proof of the present or last selling price thereof, *so as to ascertain the price the same costs the baker*; they giving previous notice to the deacon of the baker's company, or to two reputable bakers, to attend the taking of such proof. This evidence was to be engrossed in a book, and signed by the witnesses and the magistrates taking the same; and the respective prices to be declared, and entered in the said book, which was to be free to public inspection. *The assise and weight of bread for sale to be ascertained according thereto*; and was not liable to be varied, but to continue in force till a new one was made.

Upon application and proof offered of a sufficient variation of the price of any species of the said grain, by any two inhabitants or bakers, since the last assise, fresh evidence was to be taken of the current price, and a new assise to be made conformable thereto.

In the same session was also enacted 3 George III, cap. 11—"An Act for explaining and amending an Act made in the thirty-first year of the reign of his late Majesty George II, intituled an Act for the due making of Bread, and to regulate the price and assise thereof; and to punish persons who shall adulterate Meal, Flour, or Bread," wherein it is recited that the Act of 1757 (cap. 29) "is deficient in several of the provisions thereby made, when an assise of bread is not set pursuant to directions of the said Act." For remedy whereof, *it was enacted that no "assised" and "prised" bread were to be made at the same time in the same place*. Justices at any general quarter sessions, or petty sessions, might appoint which of the sorts of assise, or prised loaves, and what other sorts of bread, and of what grain, should be made for sale; they causing an entry to be made of such order, which was to be free for inspection, and a copy thereof to be set up in some market or public place, or published in the county newspapers. "No justice within their respective jurisdiction shall at any time allow the making for sale or selling any sorts of assise bread made of the flour

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1762

or the meal of wheat, other than and besides wheaten and household bread, and loaves of white bread of the price of 2d. or under." A like proportion as to weight was to be kept between the white and wheaten bread and the wheaten and household assise bread, all of which was set out in detail.

A proportion in the price was to be kept in the peck loaf and half-peck; and its other sort divisions, both in the wheaten and in household bread; and the household was to be one-fourth cheaper than the wheaten. The weights which the peck loaf, and its sub-divisions, were to be of in every sort of bread, are set out in detail. The weight if challenged to be taken before a justice within twenty-four hours after being baked, sold, or exposed for sale, and fines imposed, unless deficiency should be satisfactorily accounted for. Bread of an inferior quality to wheaten not to be sold at a higher price than household. A large Roman W to be imprinted on all wheaten bread made for sale, and a large Roman H on all household bread. Bread made of any other grain than wheat to be impressed with such letters as the justices should order, they causing an entry of the order to be made for inspection. Where no such order made by justices, the baker to mark every loaf with two distinct capital letters. Justices might enter the houses of bakers, and search for, examine and weigh all bread made for or exposed to sale, and bread found defective in weight, or not duly marked, or wanting in due baking or goodness, or being fraudulently mixed, &c., might be seized and given to the poor. The rights of the two universities were reserved. This measure consisted of twenty-five sections, many of them very complex.

'66 By 6 George III, cap. 17—"An Act for explaining and amending so much of an Act made in the first year of the reign of James II [1685], intituled, &c., as relates to the city of London"—it is enacted that the same duties which are to be performed by justices in quarter sessions under the Act of 1685 (and that of 1670) are to be performed in London by the lord mayor and aldermen; but in January and July, as well as in April and October.

"The magistrates of *Edinburgh* and *Glasgow* have put a stop to the exportation of grain, tallow, and butter, in their respective jurisdictions; a power which the magistrates of London do not seem to possess."—*Gentlemen's Magazine*, February.

'67 "At a court of aldermen held on purpose to inquire into the state of the meal trade in *London*, it appeared that a very small quantity of flour was then in town; that the principal part of the flour destined for the supply of the *London* market was on board barges and other vessels, which could not come down on account of the communication being stoppt by the *frost*; and that unless some provision was made for defraying the extraordinary expense of unshipping, and bringing it by land carriage, there would be a want of bread. It also appeared that one great reason of the present short stock of flour at the *London* market was, that the riots and tumults in those counties from which *London* was principally supplied, had prevented the usual quantity of meal being made for the *London* market. Bread rose on this inquiry to 2s. 10d. a-peck."—*Gentlemen's Magazine*, February, 1767.

73 By 13 George III, cap. 62—"An Act for better regulating the assise and making of Bread"—it is recited:

"Whereas according to the ancient order and custom of the realm, there hath been, from time immemorial, a standard wheaten bread, made of flour, being the whole product of the wheat whereof it was made; and whereas by an Act passed in the 31st year of the reign of George II, intituled, &c. [already mentioned], and by an Act passed in the 3rd year of the reign of his present majesty, for explaining and amending the said recited Act, two sorts of bread made of

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1773

wheat only are allowed to be made for sale (that is to say), wheaten and household ; whereby the flour, being the whole produce of the wheat, is so divided in the making of bread for sale, as that this standard wheaten bread made according to the ancient order and custom of the realm could be no longer made for sale ; and whereas household bread, such as is intended by the said Act of George II, to be made for sale, is not generally made for sale, whereby and for want of the said standard wheaten bread continued, many inconveniences have arisen, and many of the inferior classes of the people, more especially, have been under the necessity of buying bread at a higher price than they could afford, to their great hurt and detriment ; for remedy whereof, &c."

And it was enacted that after 29th September, 1773, standard wheaten bread be allowed to be made, baked, and sold. The weight, price, and proportion of the different loaves were again placed under regulation ; and standard wheaten bread was not to be sold as "prised loaves" at one and the same time with "assised loaves" of the same wheaten bread.

The weekly bill of mortality published Tuesday, 16th August, this year, contained the following :—

BULL, MAYOR.

LONDON, { The assize of Bread, set forth this 16th day of
to wit. { August, 1777, by the order of the court of mayor
and aldermen of the said city, to commence and take
place on Thursday next, and to be observed and kept until the
further order of the lord mayor of the said city, or the said court of
mayor and aldermen, by all persons who shall make, or bake for sale,
any bread within the jurisdiction of the said court of mayor and
aldermen, that is to say :

	lb.	oz.	dr.	
The penny loaf, or two half-				{ wheaten
penny loaves, to weigh				{ household
				{ wheaten
The two-penny loaf				{ household
				{ wheaten
The three-penny loaf				{ household
				{ wheaten
				{ household
				To be sold for
	lb.	oz.	dr.	s. d. f.
The peck loaf to weigh 17 6 -				{ wheaten
				{ household
The half-peck loaf 8 11 -				{ wheaten
				{ household
The quartern loaf 4 5 8				{ wheaten
				{ household

Note.—All loaves, if complained of, must be weighed before a magistrate within twenty-four hours after baking or exposing thereof to sale, and must be according to the respective weights in the above table.

Six drams make an ounce, and sixteen ounces a pound.

Item.—It is hereby ordered and appointed, that no person, within the jurisdiction aforesaid, shall, after Wednesday next, until the further order of the lord mayor, or of the said court of mayor and aldermen, make, or bake for sale, or sell or expose to or for sale, within the jurisdiction aforesaid, any half-quartern loaves.

And the better to distinguish and ascertain the two sorts of bread hereby ordered to be made, one from the other, there is to be imprinted and marked on every loaf of bread which shall be made, sold, carried out, or exposed to or for sale within the jurisdiction aforesaid, as wheaten bread, a large Roman W, and on every loaf of

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1773

bread, which shall be made, sold, carried out, or exposed to or for sale within the jurisdiction aforesaid, as household bread, a large Roman H. And the penalty of every omission is 20s.

HODGES.

The price of salt, set by order of the court of lord mayor and aldermen, dated the 21st of October, 1735, is 5s. the bushel; 56 lbs. to the bushel, and so in proportion for any lesser quantity; and whosoever shall sell at a higher price, or shall refuse to sell at the price aforesaid, forfeits 5*l*.

'95

There was enacted the 36 George III, cap. 22—"An Act to permit bakers to make and sell certain sorts of Bread," which recited—"Whereas it is expedient, in order to diminish the consumption of wheat, that bakers should be permitted to make and sell in all places various kinds of mixed bread, and such kinds of wheaten bread as they cannot now sell in places where an assise is set: And whereas it is not expedient to apply to such sorts of bread the restrictions contained in this table of the assise and price of bread now by law established." And it was then enacted that loaves might be made of wheat, deducting only 5 lbs. of bran per bushel, or mixed with any grain or potatoes, and sold at such prices as should be deemed reasonable. All such mixed bread to be marked to distinguish the sorts. If such bread were found deficient in weight according to the assise prescribed by 31 George II, cap. 29, or was not marked, or had any mixture not denoted by the mark, &c., the offender was to be liable to the penalties of that Act. This Act was not to infringe upon the rights and privileges of the city of London, or of the Worshipful Company of Bakers of the said city.

'97

By 37 George III, cap. 98—"An Act to amend and render more effectual an Act made in the thirty-first year of the reign of his late Majesty King George II, intituled 'An Act, &c.' [already recited in full], so far as the same relates to the assise and making of Bread to be sold in the city of London and the liberties thereof, and within the weekly bills of mortality and within 10 miles of the Royal Exchange—"corn meters were to enter in a book at the corn meter's office every Monday accounts of the wheat worked and delivered by them respectively in the preceding week. And many other minute regulations were laid down.

'98

There was enacted, 38 George III, cap. 62—"An Act to empower magistrates and justices of the peace, in setting the assise of Bread, to make allowance on account of the additional duty on Salt." In setting the assise of bread, 5s. per quarter was to be added to the average price of wheat, on account of the additional duty on salt.

Same session there was enacted 38 George III, cap. lv (local and private), "An Act for amending an Act made in the last session of parliament, intituled 'An Act to amend, &c.' [1797], which recited that it had been found necessary that certain additional regulations should be made, and further powers given for rendering more effective the Act of 1797." It is also further recited:—

"And whereas in setting the assise of bread in conformity to the directions of the said Act of the thirty-seventh year of the reign of his present Majesty, it frequently happens that the average price of wheat or of flour returned does not agree with any of the prices specified in the table affixed to the said Act, from which the assise of bread is directed to be set, and the assise is then set from the price in the said table nearest the said average price returned, by reason whereof the assise and price of bread is at times higher than by the said Act is intended, to the injury of the public, and at other times not so high, to the injury of the baker."

For remedy whereof an account of the differences was to be kept in a book at the cocket office till they amounted to half an assise,

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.	
1798	and then the next assise to be set accordingly. This measure contained in the whole twenty-five sections, many of them very complicated and penal.
1801	There were several enactments in the session of parliament held this year, which fall to be reviewed here:—
	<p>1. In the first session, the 41 George III, cap. 16 (Great Britain)—“An Act to prevent until the 16th day of November, 1801, and from thence to the end of six weeks from the commencement of the then next session of parliament, the manufacturing of any fine flour from wheat or grain, and the making of any bread solely from the fine flour of Wheat; and to repeal an Act passed in the thirty-sixth year of the reign of His present Majesty [36 George III, cap. 22], for permitting bakers to make and sell certain sorts of bread, and to make more effectual provision for the same,” which recites “whereas there is just ground to expect that the supply of good and wholesome bread will be materially augmented, and the price thereof reduced by preventing the consumption of bread made from fine flour.” Whereupon it was enacted that from 17th January, 1801, in London or within 40 miles thereof, and from 24th July in every other part of Great Britain, no meal shall be dressed finer than through certain specified wire machines or cloths, under penalties ranging from 5<i>l.</i> down to 10<i>s.</i> per bushel. This measure consisted of twenty-two sections, many of them very complex.</p> <p>2. In the second session, the 41 George III, cap. 1 (United Kingdom)—“An Act to suspend until the 15th day of March, 1801, so much of an Act made in the last session of parliament, intituled . . . [41 George III, cap. 16 (Great Britain)], as relates to other Grain and Wheat; and for indemnifying persons who have dressed, sold, and used any Meal or Flour of such other Grain finer than is prescribed by the said Act.”</p> <p>3. The 41 George III, cap. 2 (United Kingdom)—“An Act to repeal an Act made in the last session of parliament . . . [41 George III, cap. 16 (Great Britain)], and to indemnify millers and others persons who have dressed, or used any Meal or Flour of a finer description than allowed by the said Act.” The indemnity consisted of being held free from all actions for infringement of former measure now repealed, we presume, as unworkable.</p> <p>4. By the 41 George III, cap. 12 (United Kingdom), intituled, &c., the 36 George III, cap. 22, was amended, the recital being:—</p> <p>“Whereas by an Act made in the thirty-six year of the reign of His present Majesty, intituled ‘An Act,’ &c., all persons are allowed to make and sell in any place, under certain provisions and restrictions, the several sorts of loaves in the said Act particularly described, made of the whole produce of the wheat, deducting only 5 lbs. weight of bran per bushel; or made of any sort of wheaten flour, mixed with meal or flour of barley, rye, oats, buckwheat, Indian corn, pease, beans, rice, or any other kind of grain whatsoever, or with potatoes, in such proportions and at such prices, for the said loaves respectively, as the maker and sellers thereof shall deem proper and reasonable, whether any assise of bread shall be set in such place or not: and whereas it is desirable to encourage the making of good and wholesome bread, containing a larger proportion of the produce of wheat than is contained in the bread upon which the assise is usually set, and for that purpose to extend the provisions of the said Act, so far as the same relate to the making and selling of wheaten bread, &c.”</p>
'02	There were several enactments this year upon food supplies, of which however only one falls to be noticed in this <i>table</i> , viz.:—
	The 42 George III, cap. 14—“An Act to repeal an Act . . .

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.	
1802	[41 George III, cap. 7 (Great Britain)] . . . and to indemnify bakers and other persons who have sold or exposed to sale any Bread within the time prohibited by the said Act."
'05	There was enacted 45 George III, cap. 23 [local and personal]—"An Act for amending an Act passed in the thirty-seventh year of His present Majesty, to amend and render more effectual an Act made in the thirty-first year of His late Majesty, for the due making of Bread, and to regulate the price and assise thereof, and to punish persons who shall adulterate Meal, Flour, or Bread, so far as the same relates to the assise and making of Bread to be sold in the city of London, and the liberties thereof, and within the weekly bills of mortality, and 10 miles of the Royal Exchange," which recites:— <p>"And whereas by reason of the great increase that has taken place in the several articles used in the making and baking of bread, since the passing of the said Act, it is become expedient that the makers and bakers of bread for sale within the city of <i>London</i> and liberties thereof, and within the weekly bills of mortality, and within 10 miles of the Royal Exchange, should receive a greater allowance for their charges, labour, pains, livelihood, and profit than is given by the said Act."</p>
	The increased allowance is then set out in detail. An additional allowance was also to be made on account of the new duties on salt under 45 George III, cap. 14.
'13	There was enacted this year the 43 George III, cap. 116—"An Act to alter and amend two Acts of the thirty-first year of King George II., and the thirteenth year of His present Majesty, so far as relates to the price and assise of Bread to be sold out of the city of London and the liberties thereof, and beyond the weekly bill of mortality, and 10 miles of the Royal Exchange." This was a most formidable measure, filling up many pages of the statute book; but happily long since repealed.
'15	There was enacted 55 George III, cap. 99 [local and personal]—"An Act to repeal the Acts now in force relating to Bread to be sold in the city of London and liberties thereof, and within the weekly bills of mortality, and 10 miles of the Royal Exchange; and to prevent the adulteration of Meal, Flour, and Bread, and to regulate the weights of Bread within the same limits."
	This Act was amended in 1819 by 59 George III, cap. 127 [local and personal]; and in 1820, by 60 George III, cap. 1 [local, &c.], it was continued to 24th June that year; and by 1 George IV, cap. 4 [local, &c.], it was extended to 24th June, 1822.
'22	There was enacted 3 George IV, cap. 106 [local and personal]—"An Act to repeal the Acts now in force relating to Bread to be sold in the city of London, and the liberties thereof, and within the weekly bills of mortality, and 10 miles of the Royal Exchange; and to provide other regulations for the making and sale of Bread, and preventing the adulteration of Meal, Flour, and Bread, within the limits aforesaid." This was a lengthy and highly penal measure, and may be regarded as the first effectual step in that new and highly necessary crusade against adulteration of food in any of its forms. It was simply of a local, and, so far, of an experimental character. (See 1836).
'24	By 5 George IV, cap. 50—"An Act for amending an Act passed in the 53rd year of the reign of His late Majesty King George III, intituled an Act [already cited in full]—the allowance made to bakers under the Act of 1813 was to be reduced in manner herein mentioned." Then the following:
	"II. And be it further enacted, that neither this Act nor anything herein contained shall extend or be construed to extend to prejudice the ancient right or custom of the two universities of Oxford or

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.

1824

Cambridge, or either of them, or of their or either of their clerks of the market, or the practice within the several jurisdictions of the said universities, or either of them, used to set, ascertain and appoint the size and weight of all sorts of bread to be sold or exposed to sale within their several jurisdictions; but that they and every one of them shall and may severally and respectively from time to time, as there shall be occasion, set, ascertain and appoint, within their several and respective jurisdictions, the assise and weight of all sorts of bread to be sold or exposed to sale by any baker or other person whatsoever within the limits of their several jurisdictions: and shall and may inquire into and punish any breach thereof fully and freely in all respects as they used to do, and as if this Act had never been made; anything herein contained to the contrary thereof notwithstanding."

'36

There was enacted 6 and 7 William IV, cap. 37—"An Act to repeal the several Acts now in force relating to Bread to be sold out of the city of London and the liberties thereof, and beyond the weekly bills of mortality and 10 miles of the Royal Exchange; and to provide other regulations for the making and sale of Bread, and for preventing the adulteration of Meal, Flour, and Bread beyond the limits aforesaid." This is therefore the first modern measure of general application to the country; and it recites (*inter alia*):

"And whereas it is deemed expedient that the several Acts of parliament now in force relating to the making and selling of bread, or to the assise and price thereof, or to the adulteration of meal, flour, or bread, beyond the limits aforesaid, should be altogether repealed, and that in lieu thereof the regulations, provisions, and penalties hereinafter contained, and which are similar to those contained in the said recited Act [3 George IV, cap. cvi, 1822], should be substituted. But inasmuch as the purposes aforesaid cannot be effected without the aid and authority of parliament. Be it, &c."

It is then enacted that it should and might be lawful for the several makers and sellers of bread outside the limits of the city [as those inside the city had been authorised by the recited Act] to make and sell bread made of flour or meal of wheat, barley, rye, oats, buckwheat, Indian corn, peas, beans, rice or potatoes, or any of them, and with any common salt, pure water, eggs, milk, barm, leaven, potatoes, or other yeast, and mixed in such proportions as they should think fit, and with no other ingredient or matter whatsoever, subject to the regulations in this Act contained. And the bread might be made of any weight or size; but was to be sold by weight only, except as to certain fancy bread and rolls. There were heavy penalties for adulteration; and bakehouses might be searched.

'38

By 1 and 2 Victoria, cap. 28—"An Act to repeal the several Acts now in force relating to Bread to be sold in Ireland, and to provide other regulations for the making and sale of Bread, and for preventing the adulteration of Meal, Flour, and Bread in that part of the United Kingdom called *Ireland*"—it is recited:

"And whereas it is deemed expedient that the several Acts now in force relating to the making and selling of bread, or to the assise and price thereof, or to the adulteration of meal, flour, or bread, in that part of the United Kingdom called *Ireland*, should be altogether repealed, and that in lieu thereof the regulations, provisions, and penalties, hereinafter contained, and which are similar to those contained in the said recited Act [of 1836] should be substituted."

The clauses following conform to those of 1836; so that the whole of the United Kingdom was now brought under a uniform law in these matters, for the first time.

Note—The only Acts relating to bread (other than the statute upon adulteration) are those of 1824 and 1836.

TABLE IX.—*Restrictions on the Price of Food—Contd.*

A.D.	
1846	At length came the time and the man. The food of the people was no longer to be made the pretext for "unnatural legislation." Sir Robert Peel swept away the whole fabric of failures which his predecessors had built up, and which we have here passed in review; and the policy of "free trade" in the essential portion of the food of the people was for once, and, so far as the United Kingdom is concerned, for ever proclaimed!

In the preceding table, under date 1336, I have quoted a law of Edward III, that none should be served with more than two courses at any meal. This was a period of scarcity; but it was also the period of *sumptuary laws*. There were other laws in the same direction. See 1363, 1562, and 1593. There is a remarkable incident associated with the scarcity which prevailed at the commencement of the present century. In 1800 the inhabitants of Westminster, or many of them, entered into a compact known as "The Engagement," of which the following is an exact transcript:—

"We, the inhabitants, householders of the parish of St. Anne's, within the Liberty of Westminster, being earnestly desirous of giving the most steady effect to his majesty's late proclamation, and of affording all possible relief, under the present pressure, do sincerely engage, and solemnly bind ourselves, that we will practise the greatest economy and frugality in the use of every species of grain; that we will use our utmost endeavours to reduce the consumption of bread in our respective families, by at least one-third of the quantity consumed in ordinary times; and that we will in no case suffer the same to exceed one quartern loaf for each person per week; and that we will abstain from the use of flour in pastry, and moreover restrict the use of it, in all other articles than bread. And further, that such of us as keep horses, and especially horses for pleasure, will, as far as our respective circumstances will admit, carefully restrict the consumption of oats, and of other grain, for the subsistence of the same. And we further solemnly pledge ourselves, that we will use the strictest economy in every other article of food, and take the greatest possible care, that neither a profusion be allowed, nor a waste committed in our respective households.

"To which solemn engagement, not less important to us individually than to the general welfare of the country, we have affixed our hands, this 17th day of December, 1800."

Nor was this all; another step remained to make the movement complete, and this was to try and reach and teach the household domestics, a by no means easy task at any time. This was attempted to be accomplished as follows:—

"And as it is equally the duty and interest of servants, as of their employers, that this engagement should be carried into entire effect, it is expected that all servants will readily, and with a hearty good will, unite with their respective families in this necessary measure; should, however, the contrary in any instance occur:

"It is resolved, that any servant, refusing to concur in the object of this engagement, and in consequence, quitting a place, or being discharged, shall not be received by us into our homes, nor, as we have reason to believe, will they be received by any of our friends."

Further resolutions were passed for assisting the poor in the present emergency.

TABLE X.—(*External Regulations.*) *Legislative Restrictions and other Provisions on the Export or Import of Grain from or into the United Kingdom or Parts thereof.*

A.D.	
1323-24	<p>By 17 Edward II, cap. 3—"Ordinance made for the state of the land of <i>Ireland</i>"—it is enacted as follows :—</p> <p>"Moreover that our said justices, nor any of our other ministers, by colour of their office, shall arrest ships, nor other goods of strangers of our own people; but that all merchants and others may carry their <i>corn</i>, and other victuals and merchandises forth of our realm of <i>Ireland</i> unto our realm of England, and unto our land of <i>Wales</i> (except in the cases after-mentioned), paying the customs due and used; so that they make good security that they shall not go unto, nor commerce with our enemies of <i>Scotland</i>, nor other of our enemies, if any shall be. And if any justice or other officer do the contrary in the things aforesaid, and be therefore attainted, he shall satisfy the plaintiffs double damages, and shall also be grievously punished on our behalf."</p>
'29	<p>By 3 Edward III, the <i>importation</i> of wheat, rye or barley into this realm [<i>England</i>] was prohibited, unless the price of wheat exceed 6s. 8d. the quarter; rye 4s.; barley 3s., at that port or place where the same should be brought in, "upon paine of forfeiture thereof."</p>
'60	<p>By 34 Edward III, cap. 20, no corn was to be transported [exported from England] but to <i>Calais</i> and <i>Gascoign</i>.</p>
'93	<p>By 17 Richard II, cap. 7, it is enacted as follows :—</p> <p>"<i>Item.</i> The king, at the request of the commons to him made in this present parliament, hath granted license to all his liege people of his realm of England, to ship and carry corn out of the said realm, to what parts that please them, except to his enemies, paying the subsidies and duties thereof due; notwithstanding any ordaining, proclamation, or any defence made before this time to the contrary; nevertheless he will that his council may restrain the said passage when they should think best for the profit of the realm."</p>
1425-26	<p>This last named statute was confirmed by 4 Henry VI, cap. 5.</p>
'36	<p>By 15 Henry VI, cap. 2, it was enacted, "corn being at small price, viz., wheat at 6s. 8d. and barley at 3s. the quarter, <i>may be carried forth of the realm without licence,</i>" the following reasons being given :—</p> <p>"<i>Item.</i> Forasmuch as by the law it was ordained that no man might carry nor bring corn out of the realm of England without the king's license, for cause whereof farmers and other men who use manurement of their land, may not sell their corn but of a low price, to the great damage of all the realm: our said sovereign lord the king, willing in this case to provide remedy, hath ordained by authority aforesaid, that it shall be lawful to every person to carry and bring corn out of England, and the same to sell to whatsoever person that he will, except all only to the king's enemies, as often and as long as a quarter of wheat or barley is so shipped; and that without suing any license for the same: all other statutes before this time thereof made to the contrary notwithstanding. Provided always that the king be contented of his customs and money. And this ordinance shall endure till the next parliament."</p>
'41	<p>The last-named Act was confirmed by 20th of same reign (1441).</p>
'44	<p>The Act of 1436 made perpetual by 23 Henry VI, cap. 5.</p>
'63	<p>By 3 Edward IV, cap. 2, it was enacted :—</p> <p>"Whereas the labourers and occupiers of husbandry within this realm be daily grievously endangered by bringing in of corn out of other lands and parts into this realm, when corn of the growing of this realm is at a low price: our said sovereign lord the king considering the premises, by the advice, assent, and authority aforesaid, hath ordained and established, that no person from the feast of St. John the Baptist</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1463	next coming shall bring or convey into any place or port of this realm, by way of merchandise or otherwise, any wheat, rye, or barley, which is not of the growing of this land, or of any isle pertaining to the same, or of the growing of <i>Ireland or Wales</i> , at any time that the quarter of wheat doth not exceed the price of <i>6s. 8d.</i> , the quarter of rye <i>4s.</i> , and the quarter of barley <i>3s.</i> of lawful money of England, within the place or port where such wheat, rye, or barley shall happen to be brought; upon pain of forfeiture of the said wheat, rye and barley, the one-half to our said sovereign lord the king, and the other half to him which shall happen to seize any such wheat, rye or barley: provided always that this act extend not to any wheat, rye or barley taken by any of the king's liege people upon the sea without fraud or covin."
'64-65	By 4 Edward IV, cap. 5, the importation of any merchandises <i>except provisions</i> from the countries of the Duke of Burgundy (which then extended over Burgundy, Lotrike [<i>? Utrecht</i>], Brabant, Luneburgh, Flanders, Artois, Henault, Holland, Zealand, Nassau, the markship of the Holy Empire, Friesland, Meynes, &c.), was prohibited.
'72	An Act of the parliament of <i>Ireland</i> , 12 Edward IV, cap. 3—"An Act that no grain be laden out of the realm, unless the same be at a certain price"—was as follows:— <p>"Item—At the request of the commons, for that there is so great lack of money in this land, and also the grain are enhanced to a great price because of great lading from day to day used and continued within this realme; <i>by the which great dearth is like to be of graines, without some remedy be ordeyned in the said parliament.</i> Whereupon the premises considered, it is ordeyned, enacted, and established, by the authority of the said parliament, that no person or persons lade no (<i>sic</i>) grain out of the said land to no other parts without, <i>if one peck of the said grains exceed the price of ten pence</i>, upon pain of forfeiture of the said grain or the value thereof. And also the owner of the ship within the which the said graines are laden shall forfeit the said ship (that is to say), the one moyety to the party that seize or take the said grains on ship."</p>
1533	In the 25 Henry VIII, cap. 2—"Proclamations for the prices of victuals, viz., the pricing of them, and proclaiming the prices"—quoted in some detail in Table X, there is contained the following:— <p>"IV. And be it further enacted, that no person or persons, unless it be by license under the king's great seal, from henceforth shall carry or convey, or cause to be carried and conveyed, any corn, beefs, muttons, veals, porks, or any other of the above said victuals, to any the parties [<i>? parts</i>] beyond the sea, except only for victualling of the towns of <i>Callis, Guisnes, Hammes</i>, and the marches of the same, and except for victualling of masters, mariners, and merchants of ships passing the seas; and also except barrelled butter and meal to be carried to the parties of <i>Ireland</i>, as hath been accustomed; upon the pain of forfeiting of the value of the thing conveyed and carried into the parties of beyond the sea contrary to this Act, the one-half thereof to the use of our sovereign lord the king, and the other half to the party who will sue for the same," &c.</p>
'54	By 1 and 2 Philip and Mary, cap. 5, "An Act to restrain carrying of Corn, Victuals, and Wood <i>over the Seas</i> ," it is recited:— <p>"Whereas sundry good estatutes and laws have been made within this realm, in the time of the Queen's Highness most noble progenitors, that none should transport, carry or convey out of this realm into any place in the parts beyond the seas any corn, butter, cheese or other victual (except only for the victualling of the towns of Calice, Hames and Guisnes, and the marches of the same) upon divers great pains and forfeitures in the same contained. That notwithstanding, many and sundry covetous and unsatiable persons, seeking their own lucre</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1554	and gains, have, and daily do carry and convey, innumerable quantity as well of corn, cheese, butter and other victual, as of wood out of this realm into the parts beyond the seas, by reason whereof the said corn, victual and wood are grown into a wonderful dearth and extreme prices, to the great detriment of the common wealth of this your highness realm, and your faithful subjects of the same."
	In future no such exports to be made without license, except when prices should not exceed the following: wheat, 6s. 8d. per quarter; rye, 4s.; barley, 3s.; then it should "be lawful to every person and persons to carry and transport over the sea to any place beyond the seas at their pleasure, any of the said kinds of corn, so that it be not to the king and queen's enemies."
'58	By 1 Elizabeth, cap. 11—"An Acte lymiting the tymes for layeing on Lande Marchandise from beyonde the Seas, and touching Customes for Sweete Wynes"—it was provided— "XI. . . . That it shall be lawful to ship, lade and transport into the parts beyond the sea, all manner of corn and grain out of the counties of <i>Norfolk</i> and <i>Suffolk</i> , and either of them, at such places as heretofore hath been accustomed, and between the hours in this Act appointed [in the daylight and in an open place], when the same corn and grain shall not exceed the several prices mentioned in this statute, 5 and 6 Edward VI [1552, Table No. XII], entituled 'An Act against regrators, &c.,' the customs and subsidies therefore due be well and truly paid; anything in this Act or any other Act to the contrary notwithstanding. Provided that nothing herein was to be 'prejudicial or hurtful to the isle of <i>Anglesea</i> , the shires of <i>Carnarvon</i> and <i>Flint</i> in <i>North Wales</i> ; but that the inhabitants thereof, and every of them, may receive, lade, and discharge, according to their old ancient uses, customs, or liberties granted to them, or any of their predecessors, by the late king, of famous memory, king Henry the VIII, or any other her progenitors. So that they and every of them pay the customs and subsidies that shall be due, and discharge and load within the times and hours before-mentioned."
'62	By 5 Elizabeth, cap. 5—"An Acte towching certayne Politique Constitutions made for the maintenance of the Navye"—sec. 17, it is enacted that corn might be <i>exported</i> by British subjects in English ships at certain ports, when not exceeding the following prices, viz., wheat 10s., rye, pease, and beans, 8s., and barley or malt 6s. 8d. per quarter; and then— "XXVI. And be it further enacted by the authority of this present parliament, that from and after the Feast of St. Michael the Archangel next coming, it shall be lawful to all and every person and persons, being subjects to the queen's majesty, her heirs and successors, only out of such ports and creeks as by the queen's majesty's proclamation hereafter shall be published and appointed, and not elsewhere, to load, carry, or transport any wheat, barley, malt, peas, or beans into any parts beyond the seas to sell as merchandise in ships, crayers, or other vessels, whereof any English born subjects then shall be the only owners, so that the price of the said corn or grain so carried or transported exceed not the prices hereafter following, at the times, havens and places, where and when the same corn or grain shall be shipped and laden, viz., the quarter of wheat at 10s.; the quarter of rye, peas, or beans, at 8s.; the quarter of barley or malt at 6s. 8d. of current money of England; any law, usage, or statute made to the contrary hereof in anywise notwithstanding."
'71	By 13 Elizabeth, cap. 13—"An Acte for the Encrease of Tyllage," &c.—it is enacted that corn might be <i>exported</i> to friendly countries by British subjects, from certain ports, in certain ships, at all times when proclamation was not made to the contrary, on the price of

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.		
1571	....	corn being ascertained yearly in the several countries. A duty of 12 <i>d.</i> per quarter imposed on all corn exported. The queen might prohibit the exportation of corn by proclamation at all times.
'93	....	By 35 Elizabeth, cap. 7—"An Acte for continuing of diverse Statutes"—it is enacted by section 17 that the export of corn may be prohibited either generally throughout the whole realme, or in any of the counties individually, having sea-ports; and further— "XXIII. Provided always . . . That when the price of corn or grain exceedeth not the rates hereafter following, at the times and havens, and places where and when the same corn and grain shall be shipped or loaden, viz., the quarter of wheat at 20 <i>s.</i> ; the quarter of rye, pease, and beans at 13 <i>s.</i> 4 <i>d.</i> ; the quarter of barley or malt at 12 <i>s.</i> of current English money; that then it shall be lawful for all and every person or persons being subjects of her majesty, her heirs or successors, to load, carry, or transport any of the said corn or grain in such manner and form as in the said Act made for the maintenance of the navy is limited and appointed. . . ." The queen was to receive for custom and poundage for every quarter of wheat so exported 2 <i>s.</i> , and of other grain 1 <i>s.</i> 4 <i>d.</i> , in full satisfaction.
1604	....	By 1 James I, cap. 25—"An Acte for continuynge and revivinge of divers Statutes, and for repealinge of some others"—the following regulations came into force— "XXVI. Provided also, and be it further enacted by the authority of this present parliament, that when the prices of corns or grains, exceeding not the rates hereinafter following, at the times, havens, and places where or when the same corn or grain shall be shipped or loaded, viz., the quarter of wheat 26 <i>s.</i> 8 <i>d.</i> ; the quarter of rye, pease, and beans at 15 <i>s.</i> ; the quarter of barley or malt at 14 <i>s.</i> of current English money; that then it shall be lawful for every person and persons being subjects of the king's majesty, his heirs or successors, to <i>transport</i> of his own, and to buy and transport any of his said corns and grains into any parts beyond the seas in amity with his majesty to sell as merchandise in ships, crayers, or other vessels whereof any English born subject or subjects shall then be the owner or owners, any law, usage, or statute to the contrary hereof notwithstanding."
		The custom or poundage to the Crown being 2 <i>s.</i> per quarter for wheat, and 1 <i>s.</i> 6 <i>d.</i> for the other grain enumerated.
		The king might by proclamation prohibit the <i>exportation</i> of grain either from the whole or any part of the kingdom.
'23	....	By 21 James I, cap. 28—"An Act for contynewing and reviving of divers statutes, and repeal of dyvers others,"—it was enacted— "III. Provided also . . . that when the prices of corn or grain exceed not the rates hereinafter following, at the times, havens, and places when and where the same corn or grain shall be brought, shipped, or landed, viz., the quarter of wheat at 32 <i>s.</i> , the quarter of rye at 20 <i>s.</i> , the quarter of pease and beans at 16 <i>s.</i> , the quarter of barley or malt at 16 <i>s.</i> of current English money, that then it shall and may be lawful for all and every person or persons being subjects of the king's majesty . . . to carry and transport of his own, and to <i>buy</i> to sell again in markets and out of markets, and to keep or sell, or carry and transport any of the said corn and grain from the places where they shall be of such prices into any parts beyond the seas in amity with his majesty, as merchandise in ships, crays, or other vessels whereof any English born subject or subjects then shall be the owner or owners; or the same to carry, and sell in other parts within this realm or dominions thereof, any law, usage, or statute to the contrary notwithstanding."
		The king's custom or poundage to be 2 <i>s.</i> per quarter for wheat, and

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1623 ...	1s. 4d. for other grain. The king might by proclamation restrain transportation of grain. By this Act there was repealed a considerable number of the preceding Acts named in this table.
'27 ...	The Act of 1623 was confirmed by 3 Car. I, cap. 4 (5), section 24.
'60 ...	By 12 Car. II, cap. 4—"A subsidy granted to the king of tonnage and poundage, and other sums of money payable on merchandise exported and imported"—it was enacted:— "XI. It shall and may be lawful, immediately after the passing of this Act, for any person or persons to ship, carry out, and transport, by way of merchandise, these several sorts of goods following, that is to say . . . and wheat, rye, pease, beans, barley, malt, and oats, beef, pork, bacon, butter, cheese, candles, when the same do not exceed in price at the ports from whence they are laden, and at the time of their lading, these prices following, that is to say, wheat, the quarter, 40s.; rye, beans, and pease, the quarter, 24s.; barley and malt, the quarter, 20s.; oats, the quarter, 16s.; beef, the barrel, 5l.; pork, the barrel, 6l. 10s.; bacon, the pound, 6d.; butter, the barrel, 4l. 10s.; cheese, the hundred, 1l. 10s.; candles, the dozen pounds, 5s., paying the respective rates appointed by this Act and no more, any former law, statute, prohibition, or custom notwithstanding. As a specimen of the scale of duties— <i>Exports</i> , beef, the barrel, 3l.: <i>Imports</i> , beef, the barrel, 1l."
'63 ...	By 15 Car. II, cap. 7—"An Act for the <i>encouragement of Trade</i> "—it is recited:— "Forasmuch as the encouragement of tillage ought to be in an especial manner regarded and endeavoured; and the surest and effectual means of promoting and advancing any trade, occupation or mystery, being by rendering it profitable to the users thereof; (2) and great quantities of land within this kingdom for the present lying in a manner waste, and yielding little, which might thereby be improved to considerable profit and advantage (if sufficient encouragement were given for the laying out cost and labour on the same), and thereby much more corn produced, great numbers of people, horses and cattle employed, and other lands also rendered more valuable." And it is then enacted that when the price of wheat did not exceed at the place from which it was to be exported 48s. per quarter Winchester measure, barley or malt 28s., buckwheat 28s., oats 13s. 4d., rye 32s., peas or beans 32s. of English money, then the same might be exported to places beyond the seas. And when the prices did not exceed those named at the place of import, there might be imported wheat upon paying a customs duty of 5s. 4d., rye 4s., barley or malt 2s. 8d., buckwheat 2s., oats 1s. 4d., and peas or beans 4s. And it was further enacted, that when the prices of corn or grain, Winchester measure, did not exceed the rates above stated at the markets, havens, or places where the same should be bought, that then it should "be lawful for all and every person and persons (not forestalling nor selling the same in the same market within three months after the buying thereof) to buy in open market, and to lay up and keep in his or their granaries or houses, and to sell again, such corn or grain of the kinds aforesaid as without fraud or covin shall have been bought at or under the price before expressed, without incurring any penalty; any law, statute or usage to the contrary notwithstanding." By this Act it is recited:— "XIII. Whereas a great part of the richest and best land of this kingdom is and cannot so well be otherwise employed and made use of as in the feeding and fattening of cattle, and that of the coming in of late of vast numbers of cattle already fattened, such lands are in many places much fallen, and likely daily to fall more in their rents

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.		
1663	....	<p>and values, and in consequence other lands also, to the great prejudice, detriment, and impoverishment of this kingdom.”</p> <p>“And it is thus enacted, That for every head of great cattle (except such as are of the breed of <i>Scotland</i>) that shall be imported and brought into <i>England, Wales</i>, or the town of <i>Berwick-upon-Tweed</i> after the 1st day of July and before the 20th day of December in any year; and for every head of great cattle of the breed of <i>Scotland</i> that shall be imported or brought into <i>England, Wales</i>, or the town of <i>Berwick</i> after the 24th August and before the 20th December in any year, there shall be paid to his majesty, his heirs and successors, the sum of 20s., and the sum of 10s. to him or them that shall inform and seize the same.”</p> <p>For every sheep so imported there was to be paid the sum of 10s. The Act, so far as it related to cattle and sheep, was not to come into force before the 1st July, 1664, nor to continue longer than the end of the first session of the next parliament. (See 1665).</p> <p>Section 18 of this Act is as follows:—“Provided also and be it enacted that it shall and may be lawful to import cattle of the breed of the Isle of Man not exceeding 600 in any one year. And come of the growth of that island out of that island into England, soe as the said cattle be landed at Chester, Liverpoole, or Wirewater, anything in this Act to the contrary thereof in any wise notwithstanding.”</p> <p>Adam Smith observed of this measure, that with all its imperfections, it had done more to promote plenty than any other law in the statute book.</p>
'65	....	<p>By 18 Car. II, cap. 2—“An Act against importing Cattle from <i>Ireland</i> and other parts beyond the Seas, and Fish taken by Foreigners”—after reciting the Act of 1663 (sec. 13) it is enacted—“That such importation from and after the 2nd February in the present year 1666, is a public and a common nuisance, and shall be so adjudged, deemed, and taken to be to all intents and purposes whatsoever;” and further:—</p> <p>“That if any great cattle, sheep, or swine, or any beef, pork, or bacon (except for the necessary provision of the respective ships or vessels in which the same shall be brought, not exposing the same or any part thereof to sale) shall from and after the said 2nd February, by any wise whatever be imported or brought from beyond seas into this kingdom of <i>England</i>, dominion of <i>Wales</i>, or town of <i>Berwick-upon-Tweed</i>, that then it shall and may be lawful for any constable, tithing man, head borough, churchwardens, or overseers of the port, or any of them, within the respective liberties, parishes, or places, to take and seize the same, and keep the same during the space of forty-eight hours in some publick or convenient place where such seizure shall be made, within which time if the owner or owners, or any for them or him, shall make it appear unto some justice of the peace of the same county where the same shall be so seized, by the oaths of two credible witnesses, that the same were not imported from <i>Ireland</i>, or from any other place beyond the seas not hereinafter excepted, after this said 2nd day of February, then the same upon the warrant of such justice of the peace shall be delivered without delay; but in default of such proof and warrant, then the same to be forfeited: one-half thereof to be disposed to the use of the poor of the parish where the same shall be so found or seized; the other half to be to his own use that shall so seize the same.</p> <p>“And for the better encouragement of the <i>Fishery</i> of this kingdom, be it further enacted by this authority aforesaid, that if any ling, herring, cod, or pilchard, fresh or salted, dried or bloated, or any salmons, eels, or congers, taken by any foreigner, aliens to this kingdom, shall be imported, uttered, sold or exposed for sale in this kingdom, that then it shall and may be lawful for any person or</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.		
1665 ...	persons to take and seize the same; the one-half thereof to be disposed of to the use of the poor of the parish, &c. [as before].	
	<p>"Provided always, that nothing in this Act shall be construed to hinder the importation of cattle from the <i>Isle of Man</i> in this kingdom of England, so as the number of the said cattle do not exceed 600 head yearly; and that they be not of any other breed than of the breed of the <i>Isle of Man</i>; and that they be loaded at the port of Chester, or some of the members thereof, and not elsewhere."</p> <p>This Act was to continue until the end of seven years. It was made perpetual by 32 Car. II, cap. 2, sec. 2 (1680).</p>	
'68 ...	The 20 Car. II, cap. 7, "An additional Act against the importation of Foreign Cattle," all officers who had seized any cattle, sheep, swine, beef, pork, or bacon, were saved harmless; while those who neglected to seize were made liable to a penalty of 100 <i>l</i> .	
'70 ...	By 22 Car. II, cap. 13—"An Act for the Improvement of Tillage and the Breed of Cattle"—It was enacted that it should be lawful after the 24th June of this year for all and every person or persons, native or foreigner, at any time or times, to ship, lade, carry, and transport as merchandize all sorts of corn and grain, "although the prices thereof shall exceed the rates set down" in the Act of 1663, paying for the same the rates stated in the subsidy of 1660. But when the rates did not exceed those following, then there should be paid the custom and poundage following, viz., for wheat when the same shall not exceed the price of 53 <i>s</i> . 4 <i>d</i> . per quarter, 16 <i>s</i> .; and when the price of wheat exceeded the price last named, but did not exceed 80 <i>s</i> ., the sum of 8 <i>s</i> .; for every quarter of rye when the price did not exceed 40 <i>s</i> ., 16 <i>s</i> .; for barley or malt when it did not exceed 32 <i>s</i> ., 16 <i>s</i> .; for buckwheat the same; for oats not exceeding 16 <i>s</i> . per quarter, 5 <i>s</i> . 4 <i>d</i> .; for peas and beans not exceeding 40 <i>s</i> . per quarter, 16 <i>s</i> .; each quarter to contain 8 bushels, and each bushel 8 gallons and no more.	
	This Act also contained the following:—	
	<p>"III. And for the further encouragement of <i>French</i> or pearl barley in this kingdom, there shall be paid for the custom of every cwt. . . . the sum of 5<i>s</i>."</p> <p>"IV. And for the further encouragement of breeding and feeding of cattle of all sorts, be it enacted that from the 24th June which shall be in the year of our Lord God 1670, and from thenceforward, it shall be lawful for every person or persons, native or foreigner, at any time or times, to ship, lode, and transport [export] by way of merchandise these sorts of goods following, that is to say, beef, pork, bacon, butter, cheese, and candles, though the same do exceed in price at the ports from which they are laden, and at the time of their lading, the prices set down and limited in the aforesaid [1660] . . . or any other law, statute, usage, or other prohibition to the contrary thereof in anywise notwithstanding; paying for the same the respective rates effected by the said Act, and no more," with certain enumerated exceptions. It was also made lawful to export cows and heifers, swine or hogs, horses and mares.</p>	
	Further provisions hereto were made by 3 William and Mary, cap. 8.	
'80 ...	The 31 Car. II, cap. 2—"An Act prohibiting the importation of cattle from <i>Ireland</i> "—while making the Act of 1665 perpetual, "forasmuch as, by long experience, the said law hath been found to be very beneficial to this kingdom," contains further enactments in the same direction.	
	<p>"VIII. And whereas the present laws do not sufficiently provide against the importation of mutton and lamb out of <i>Ireland</i> and other parts beyond the seas into this kingdom, but that great quantities thereof are daily imported and sold, to the great loss and prejudice of this kingdom. Be it therefore enacted, that from and</p>	

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1680	after the said 2nd February, <i>no mutton or lamb shall be imported into this kingdom from the kingdom of Ireland or any foreign parts</i> ; and all mutton and lamb imported from Ireland, or beyond the seas, or that shall be exposed to sale within this kingdom, shall be subject to the like seizure, and the importers and sellers thereof respectively in the like penalties, as are provided and appointed by any former law against any importer or seller, or importation of any beef, pork, or bacon, from the kingdom of <i>Ireland</i> or any foreign parts.
	“IX. And whereas the present laws do not sufficiently provide against this <i>importation of butter and cheese out of Ireland</i> into this kingdom, but that great quantities thereof are daily imported and sold to the great loss and prejudice of this kingdom; be it therefore enacted, that from and after the said 2nd February <i>no butter or cheese shall be imported into this kingdom from the kingdom of Ireland</i> ; and all butter and cheese imported from <i>Ireland</i> , or that shall be exposed to sale within this kingdom, shall be subject to the like seizures; and the importers and sellers thereof respectively to the like penalties, as are provided in any former law against any importer or seller, or importation of any beef, bacon, or pork from the kingdom of <i>Ireland</i> .”
	As to cattle, it was further provided that the seizure might be made in any parish to which the same might be removed.
'85	By 1 James II, cap. 19—“An Additional Act for the <i>Improvement of Tillage</i> ”—the Act of 22 Car. II, “of ever blessed memory,” cap. 13 (1670), is recited, but inasmuch as no provision was made by the said Act for ascertaining and determining the prices therein set forth, “by reason whereof several great quantities of foreign corn and grain have been imported without paying the respective duties by the said Act appointed, contrary to the true intent and meaning of the said Act,” it was now determined that justices of the peace upon the coast have power, “upon the oaths of two or more honest and substantial persons of the respective counties, being neither merchants nor factors for the importing of corn, nor anyways concerned nor interested in the corn so imported, and each of them having a freehold estate of 20 <i>l.</i> per annum or a leasehold estate of 50 <i>l.</i> per annum above all charges and reprints, and being skilful in the price of corn,” &c., to determine the prices for the purposes of the said recited Act.
'88	There were two enactments this year, the first embodying quite a new feature, that of <i>bounties</i> on export.
	1. The 1 William and Mary, statute 1, cap. 12—“An Act for the encouraging the <i>exportation</i> of Corn”—wherein it is recited: “Forasmuch as it hath been found by experience, that the exportation of corn and grain into foreign parts, when the price thereof is at a low rate in this kingdom, hath been a great advantage, not only to the owners of land, but to the trade of this kingdom in general,” &c. It was therefore enacted that when malt or barley, “Winchester measure,” should be at or under 24 <i>s.</i> per quarter, rye at or under 32 <i>s.</i> , and wheat at or under 48 <i>s.</i> per quarter, the masters and crews of British ships exporting the same should receive a <i>bounty</i> on a scale set forth in the said Act. Precautions taken not to allow such grain to be reshipped into Great Britain.
	2. 1 William and Mary, cap. 24.—An excise Act—contained the following:—
	“XVIII. And be it enacted, that when malt or barley of English growth, <i>Winchester</i> measure, shall be at 24 <i>s.</i> by the quarter, or under, rye, of English growth, at 32 <i>s.</i> by the quarter, or under, and wheat, of English growth, at 48 <i>s.</i> by the quarter, or under, in the town or port of <i>Berriek-upon-Tweed</i> ; every merchant or other person who shall put on shipboard in <i>English shipping</i> , the master

TABLE X.--*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1688	<p>and two-thirds of his mariners at least being their Majesties' subjects, any sorts of the corn aforesaid, from the said port or town of <i>Berwick</i>, with intent to export the said corn into parts beyond the seas, and shall pursue all and every the methods and things prescribed and appointed in that behalf, in and by the said Act made in this present session of Parliament, intituled 'An Act for encouraging the exportation of Corn,' shall have the benefit and advantage of the said Act, and of everything therein contained, as fully to all intents and purposes as if the said corn had been put on shipboard from any port or ports of this kingdom or dominion of Wales.</p>
'97	<p>"XIX. Provided always, and be it enacted, that if any merchant or other person whatever shall put on shipboard <i>any corn of the growth of Scotland</i>, out of the said port of <i>Berwick-upon-Tweed</i>, that all such corn shall be forfeited (that is to say), one-third part to their Majesties, one-third part to the informer, and the other third part to the poor of the said town of <i>Berwick</i>."</p> <p>By 8 and 9 William III, cap. 22, a duty of 6<i>d.</i> per bushel was laid upon malt.</p>
'98	<p>Grain and other articles of food were afterwards the subjects of fiscal burdens by indirect enactments wherein they are nowhere specifically named. Thus, in the 9 and 10 William III, cap. 23—"An Act for granting to his majesty a further subsidy of tonnage and poundage towards raising the yearly sum of 700,000<i>l.</i> for the service of His Majesty's Household, and other uses therein mentioned, during His Majesty's life"—a duty of 12<i>d.</i> in the £ on the value of all goods and merchandises imported was imposed. This was held to apply to grain, and accordingly raised the duty then payable thereon.</p>
'98	<p>By 10 William III, cap. 3—"An Act to <i>prohibit the Exportation</i> of any Corn, Malt, Meale, Flour, Bread, Biscuit, or Starch for one yeare from the 10th February, 1698"—it is recited that the price of corn in the kingdom of England, dominion of Wales, and town of <i>Berwick-upon-Tweed</i> was at this time excessive; and that in several other parts of Europe it was "scarcer and dearer than in England;" hence no corn, &c., was to be exported except under the provisions of this Act. The commissioners of customs might seize all vessels unduly laden with corn for exportation, even to Scotland, and take the same to the king's warehouse. But corn might be exported for sustenance of crews and passengers of ships, and for British ports and colonies, and for the benefit of English fisheries, and malt to the Channel Islands, also carried coastwise, and on navigable rivers. And on decrease of price the king might by proclamation permit exportation before expiry of this Act.</p>
'98-99	<p>By 11 William III, cap. 1—"An Act for taking away the <i>Bounty Money</i> for <i>exporting</i> Corn from the 9th February, 1699, to the 29th September, 1700"—the purposes for which the said bounties had been instituted are recited, and then: "But forasmuch as it appears that the present stock and quantity of corn in this kingdom may not be sufficient for the use and service of the people at home, should there be too great an exportation into parts beyond the seas, which many persons may be prompted to do for their own private advantage and the lucre of the said bounty or allowance-money," it was suspended accordingly for one year.</p>
1700	<p>1. By 11 and 12 William III, cap. 20—"An Act for taking away the Duties upon the Woollen Manufactures, Corn, Grain, Bread, Biscuit and Meal Exported"—it was enacted:—</p> <p>"IV. And for the greater encouragement of tillage, be it further enacted by the authority aforesaid, that from and after the 30th day of March, 1700, the subsidy and all other duties whatsoever payable for or upon the exportation of wheat, rye, barley, malt, beans, peas, and other sorts of corn and grain whatsoever, ground or unground, and</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1700	for and upon the exportation of bread, biscuit, and meal, or any of them, out of or from the kingdom of England, dominion of Wales, or town of Berwick-on-Tweed, as to so much of the said commodities, or any of them, as shall be so exported after the said 30th day of March, shall cease, determine and be no longer due or payable to His Majesty, his heirs and successors, any law, statute, usage, or prescription to the contrary notwithstanding. 2. By 12 and 13 William III, cap. 10—An Act of supply—there is provision made as to the payment of the bounties under the Act of 1688.”
'03	By 2 and 3 Anne, cap. 9—“An Act for granting to Her Majesty an additional subsidy of tonnage and poundage for three years,” &c.—the increase of duty on all grain and other merchandise imported was increased by one-third.
'03	By the 9th Act of the parliament of <i>Scotland</i> , holden by Queen Anne this year, intituled, “An Act discharging importation of Irish Victual, Beef and Cattle,” the importation of victual from Ireland or any other places beyond the seas into Scotland was restrained and prohibited, under several penalties contained in the said Act, and in other Acts of the Parliament of Scotland therein referred to. But with this proviso, that when, by reason of dearth, the prices of victual should exceed the rates specified in the said Act, the Lords of Her Majesty’s Privy Council of Scotland should have power, after due trial by them taken of the prices of victual, to suspend and discharge the execution of the said prohibitory Acts for such space of time as the exigencies of the said dearth should require.
'04	By 3 and 4 Anne, cap. 5—“An Act for granting to Her Majesty a further subsidy on wines and merchandises imported”—an additional poundage equal to two-thirds of that imposed by 9 William III, cap. 23, was imposed. The effect of this and the previous as also of later Acts of the same character upon the duty leviable upon imported wheat, will be shown in a table given by way of supplement to the present table.
'06	In the Treaty of Union between England and Scotland, made this year, it was provided by Article VI, that the prohibition as then in force by the law of Scotland against the importation of victual from Ireland, or any other place beyond the seas, into Scotland, should, after the union remain in the same force as it then was, until more proper and effectual ways should be provided by the parliament of Great Britain for discouraging the importation of the said victual from beyond the sea. This treaty was confirmed by 5 Anne, cap. 8. Same session, by 5 Anne, cap. 29, parliament desiring “that there may be as great an <i>equality of trade</i> as possible” among all Her Majesty’s subjects, enacted (by section 15) that exporters of <i>malt made of wheat</i> should be entitled to 5s. per quarter bounty money (in conformity with 1 William and Mary, statute 1, cap. 12 (1682).
'09	By 8 Anne, cap. 2—“An Act to prohibit the <i>exportation</i> of Corn, Malt, Meal, Flour, Bread, Biscuit and Starch, and Low Wines, Spirits, Worts, and Wash drawn from malted Corn”—it is recited:— “Whereas the price of corn at this time within the kingdom of Great Britain is become very great, and (in some parts thereof) excessive, which tends to the impoverishment of many of Her Majesty’s good subjects, especially of poor manufacturers and others of a meaner condition, and by reason that corn in several other parts of Europe is scarcer and dearer than in Great Britain, it is likely that several persons for their private advantage or lucre will not only export or convey great quantities of corn from this kingdom, but likewise distil excessive quantities of low wines and spirits from malt, corn and grain, in order to export the same to foreign parts, whereby the price of corn will be further enhanced, to the detriment of Her Majesty’s good

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1709	subjects, and the destruction of many of them, if a timely remedy in this behalf be not provided. Be it therefore," &c.
	It was then enacted that from 29th September, 1710, no exportation of the articles named be made other than as therein provided. Export might be permitted by proclamation. No limit of price named.
	Same session, by 8 Anne, cap. 11—"An Act to explain so much of the Act for prohibiting the exportation of Corn, Malt, Meal, Flour, Bread, Biscuit, and Starch, and Low Wines, Spirits, Worts, and Wash drawn from Malted Corn; by which Act the said commodities are admitted to be carried from the <i>Isle of Wight</i> to several markets; and for giving liberty to export certain quantities of Oatmeal for the uses of the <i>British Hospitals</i> beyond the seas"—it was permitted after 2nd March, 1710, to export corn of the growth of the <i>Isle of Wight</i> , to <i>Southampton</i> , &c., in any vessel whatever, but not elsewhere, taking such coequets, &c., as by the former Act. After 1st March, 1710, any person having a licence from the queen might export oatmeal, not exceeding 400 bushels, for <i>Holland</i> , not exceeding 200 bushels to <i>Barcelona</i> , and not exceeding the like quantity to <i>Lisbon</i> , for the use of <i>British</i> troops in those places.
'29	There was enacted 2 George II, cap. 18—"An Act to ascertain the custom payable for Corn and Grain imported; for better ascertaining the price and quantity of Corn and Grain, for which a bounty is payable on exportation," &c., &c. Powers were given to justices at quarter sessions to determine the price of grain.
'32	The 5 George II, cap. 12, amended the Act of 1685 regarding the mode of "determining the common market price of middling English corn and grain," which "had been found ineffectual;" and the matter was now to be determined by the oath of the grand jury assembled at quarter sessions, on a presentment made in open court. This mode was not to extend to London.
'38	By 11 George II, cap. 22—"An Act for punishing such persons as shall do injuries and violences to the persons or properties of His Majesty's subjects, with intent to hinder the exportation of Corn"—it is recited:—
	"Whereas many disorderly and evil-minded persons have of late frequently assembled themselves in great numbers, committed great violences, and done many injuries to the persons and properties of His Majesty's subjects, with intent to hinder the exportation of corn, whereby many of His Majesty's subjects have been deterred from buying of corn and grain, and following their lawful business therein, to their great loss and damage, as well as the great damage and prejudice of the farmers and landowners of the kingdom, and of the nation in general."
	It was then enacted that, "for the better preventing such wicked and disorderly practices," persons using violence to hinder the purchase and carriage of corn, should on conviction be imprisoned and publicly whipped. The "Hundred" was made liable to the extent of 100 <i>l.</i> for corn destroyed:—
'41	1. By 14 George II, cap. 3—"An Act to prohibit for the time therein limited the exportation of Corn, Grain (<i>Rice</i> excepted), Meal, Malt, Flour, Bread, Biscuit, Starch, Beef, Pork, and Bacon, the exportation of which may at this time be greatly prejudicial to His Majesty's subjects;" and was therefore restrained up to the 31st December. But His Majesty might nevertheless grant power to export these things.
	2. There was enacted, 14 George II, cap. 7—"An Act for licensing the importation of Victual from <i>Ireland</i> and other parts beyond the seas into Scotland, in time of dearth and scarcity." (See 1703 and 1706.)

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1748	By 21 George II, cap. 2—"An Act for granting to His Majesty a subsidy of poundage upon all goods and merchandises to be <i>imported</i> into this kingdom," &c.—an additional duty of 12 <i>d.</i> in the £ was imposed.
'51	By 24 George II, cap. 56—"An Act for ascertaining the admeasurement of Wheat, Meal, or other Corn or Grain ground, for which a bounty is payable on <i>exportation</i> ," &c.—it is stated that doubts had arisen, and these the present Act now solved.
'53	By 26 George II, cap. 15—"An Act for allowing interest upon certain debentures for the bounty granted on the <i>exportation</i> of Corn"—It appears that at certain ports whereat the collectors had not in hand at the time of export sufficient funds to pay the bounties provided by some of the Acts cited for the export of corn, certificates were to be given, and these certificates, with debentures attached, were to be presented for payment to the general receiver or cashier of the customs; but the amount of corn exported had been so large that the funds for the purpose were exhausted, and it was therefore now enacted that all debentures six months or more overdue carry interest at the rate of 3 per cent. per annum. Notice was to be given when treasury could pay off debentures.
'56	<p>There were several enactments this year which require to be reviewed:—</p> <ol style="list-style-type: none"> <li>1. The 30 George II, cap. 1—"An Act to prohibit for a time, to be limited, the <i>exportation</i> of Corn, Malt, Meat, Flour, Bread, Biscuit, and Starch"—it is enacted that the exportation of the same be greatly prejudicial to His Majesty's subjects, and is therefore prohibited from Great Britain and Ireland up to 25th December the next ensuing; exception in favour of grain carried coastwise, and to certain British Isles. <li>2. The 30 George II, cap. 7—"An Act to discontinue for a limited time the duties upon Corn and Flour imported; and also upon such Corn, Grain, Meat, Bread, Biscuit and Flour, as have been or shall be <i>taken from the enemy</i>, and brought into this kingdom." <li>3. The 30 George II, cap. 9—"An Act to prohibit for a limited time the <i>exportation</i> of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit, Starch, Beef, Pork, Bacon, and other Victual (except Fish, Roots and Rice, to be exported to any part of <i>Europe</i> southward of Cape Finisterre) from His Majesty's colonies and plantations in <i>America</i>, unless to <i>Great Britain or Ireland</i>, or to some of the said colonies and plantations, and to permit the <i>importation</i> of Corn and Flour into Great Britain and Ireland in neutral ships; and to allow the <i>exportation</i> of Wheat, Barley, Oats, Meal and Flour from Great Britain to the Isle of Man, for the use of the inhabitants there." <li>4. The 30 George II, cap. 14—"An Act for continuing an Act of this present session of parliament, entituled, 'An Act to discontinue for a limited time the duties upon Corn and Flour imported; and also upon such Corn, Grain, Meal, Bread, Biscuit and Flour as have been or shall be <i>taken from the enemy</i>, and brought into this kingdom.'" Recited Act continued to 15th November, 1757.
'57	<p>There are several enactments also this year:—</p> <ol style="list-style-type: none"> <li>1. The 30 George II, cap. 7—"An Act to discontinue for a limited time the duties upon Corn and Flour <i>imported</i>; and also upon such Corn, Grain, Bread, Biscuit and Flour, as have been or shall be taken from the enemy, and brought into this kingdom," simply recites—"Whereas the discontinuing of the duties for a limited time upon corn and flour imported into this kingdom, and also upon such corn, grain, meal, bread, biscuit and flour, as have been or shall be taken from the enemy and brought into this kingdom, may be of advantage to His Majesty's subjects," and it is therefore enacted accordingly.

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*A.D.
1757

2. The 30 George II, cap. 9, sec. 13, recited as follows:—"And whereas by an Act passed this present session of parliament, entitled, 'An Act to prohibit,' &c. [30 George II, cap. 1] . . . it was enacted that no person at any time before the 25th December, 1757, should export or carry out of or from the kingdoms of Great Britain or *Ireland*, any sort of corn, malt, meal."

3. By 31 George II, cap. 1, each of the two last Acts were continued in force to 24th December, 1758; and all duties upon grain *imported* were discontinued; with an exception in favour of His Majesty, "with advice of privy council, to order and permit the exportation of such quantities of the commodities aforesaid as may be necessary for the sustentation of any *forces in the pay of Great Britain, or of those of His Majesty's allies acting in support of the common cause.*" The payment of bounty during the continuance of this Act prohibited.

4. The 31 George II, cap. 28—"An Act to permit the *importation* of Salted Beef, Pork and Butter from *Ireland* for a limited time, viz., for five months."

5. The 31 George II, cap. 37—"An Act to permit the *exportation* of certain quantities of *Malt* now lying in His Majesty's storehouses; and to allow the bounty upon such Corn and Malt as was shipped and cleared for *Ireland*, on or before a limited time; and to authorise the transportation of Flour, Meat, Bread and Biscuit to the islands of *Guernsey* and *Jersey*, for the use of the inhabitants there, in lieu of the Wheat, Malt or Barley which may now, by law, be transported to those islands." By this enactment the merchants of *Norwich* and *Yarmouth* were permitted (sec. 1) to export to *Holland*, within a limited time 200 lasts of long malt, lying in the king's storehouses, which were entered for exportation on or before 31st January, 1757, they giving security for the due loading, &c., to *Holland*; and (sec. 4) the inhabitants of *Lynn* and *Wells* (*Norfolk*) were permitted to export to *Holland*, under like regulations, 350 lasts of malt, lying in the king's storehouses; while liberty was also granted (sec. 6) of exporting from the port of *Southampton* within a limited time, and in limited quantities, meal, flour, bread or biscuit, for the use of the inhabitants of *Jersey* and *Guernsey*; 70 lbs. avoirdupoise weight to be deemed equal to a bushel.

58 There were again several enactments bearing upon the importation and exportation of food, grain, meat, &c. :—

1. The 32 George II, cap. 1, "An Act to continue for a limited time the Act made in the last session of Parliament, entitled, 'An Act to permit the importation of Salted Beef, Pork and Butter from *Ireland*, for a limited time, and to amend the said Act.'" This Act in its second recital says, "And whereas doubts have arisen whether all kinds of salted pork, and hogmeat, may be *imported from Ireland* by virtue of the above recited Act," and it was therefore enacted that all kinds of salted pork and "hogmeat," might be imported.

2. The scarcity of grain being still felt, the Acts of last session were continued in force by 32 George II, cap. 2, "*An Act to continue for a further time the prohibition of the exportation of Corn, Malt, Meal, Flour, Bread, Biscuit, and Starch,*" till the 24th December, 1759, "unless the term should be abridged by parliament, or proclamation, or Order of Council."

3. But in the meantime, as grain became abundant in quantity, and reduced in price in a corresponding degree, there was enacted 32 George II, cap. 8, "*An Act for taking off the prohibition on the exportation of Corn, Malt, Meal, Flour, Bread, Biscuit, and Starch.*"

4. "An Act to permit the free importation of Cattle from *Ireland* for a limited time, viz., for five years, from 1st May, 1759, duty free."

The Act for discontinuing the duties on grain *imported* was allowed to expire.

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.		
1759	...	There was enacted, the 33 George II, cap. 5, "An Act to continue for a limited time the <i>importation</i> of Salted Beef, Pork, and Butter from Ireland."
'60	...	There was enacted, 1 George III, cap. 4, "An Act to continue for a limited time the <i>importation</i> of Salted Beef, Pork, and Butter from Ireland," and the time was continued to 24th December, 1761. <i>Note.</i> —Mr. Comber estimated the average annual produce of wheat at this date in Great Britain at 3,800,000 quarters, of which about 3,500,000 were required for home consumption; and 300,000 quarters were left for export.
'61	....	There was enacted, 2 George III, cap. 6, "An Act for the Importation of Salted Beef, Pork, and Butter into the Kingdom from <i>Ireland</i> , for a limited time, for the supply of His Majesty's Ships, Transports, and other Ships and Vessels in His Majesty's service and pay."
'63	....	There was enacted, 4 George III, cap. 28, "An Act to enable His Majesty, with the advice of his privy council, to order the <i>importation</i> of Provisions from <i>Ireland</i> during the next recess of Parliament under certain restrictions and regulations therein mentioned;" the preamble whereof recites, "Whereas the price of provisions is at present high, and may become higher; that it greatly affects the poor people, and will tend to hurt the trade and manufacture of this kingdom if not timely prevented," therefore His Majesty was enabled, with the advice of his privy council, to order the importation of salt provisions from Ireland during the recess of Parliament; and all persons were exempted from duties and from penalties on account of such importation, other than the following duties to the commissioners for the duties on salt, viz., 3s. 4d. per barrel on beef and pork, and 1s. 3d. per cwt. for all dried beef, neats' tongues, and hogmeat, and 4d. per cwt. for salted butter; to be paid into the exchequer a part of the duties on salt.
'65	....	The measures before parliament on the food question this year were:— 1. The 5 George III, cap. 1, "An Act for importation of Salted Beef, Pork, Bacon, and Butter from <i>Ireland</i> for a limited time, viz., for twelve months from date of Act, on paying Salt Duties." 2. The 5 George III, cap. 10, "An Act to permit the free importation of Cattle from <i>Ireland</i> ." This importation was to continue for seven years without payment of duties. 3. 5 George III, cap. 31, " <i>An Act</i> to discontinue for a limited time the duties upon Wheat and Wheat Flour <i>imported</i> , and also the bounty payable on exportation of Wheat and Wheat Flour." 4. The 5 George III, cap. 32, "An Act to enable His Majesty, with the advice of his Privy Council, to prohibit the <i>exportation</i> of Wheat, Wheaten Meal, Flour, Bread, Biscuit, and Starch, during the next recess of Parliament, at such time and in such manner as the necessity of the time may require, and he, in his wisdom, shall think convenient and needful."
'66	....	The following Acts formed part of the legislation of this session:— 1. The 6 George III, cap. 1, "An Act to continue an Act made in the last session of Parliament, intituled 'An Act for importation of Salted Beef, Pork, Bacon, and Butter from Ireland for a limited time.'" 2. The 6 George III, cap. 3, "An Act for allowing the <i>importation</i> of Corn and Grain from His Majesty's Colonies in <i>America</i> into this Kingdom, for a limited time, free of duty." 3. The 6 George III, cap. 4, "An Act for allowing the importation of Oats and Oatmeal into this Kingdom, for a limited time, duty free." 4. The 6 George III, cap. 5, "An Act to prohibit the <i>exportation</i> of Corn, Grain, Malt, Meal, Flour, Bread, Biscuit, and Starch for a limited time."

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.

1766 ...

5. This last Act was amended by an Act of the same session, 6 George IV, c. 40, to the extent of allowing wheat to be exported from *Southampton* and *Exeter* for the use of the inhabitants of the *Isle of Man*, but not to exceed in the whole 2,500 quarters.

'67 ...

The legislation of this year embraced the following :—

1. The 7 George III, cap. 1, "An Act to continue an Act made in the fifth year of the reign of his present Majesty, intituled 'An Act for importation of Salted Beef, Pork, Bacon, and Butter from *Ireland*, into this Kingdom for a limited time.'"

2. The 7 George III, cap. 3, "An Act to prohibit for a limited time the *exportation* of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit, and Starch, and also the extraction of Low Wines and Spirits from Wheat and Wheat Flour."

3. The 7 George III, cap. 4, "An Act for allowing the *importation* of Wheat and Wheat Flour from His Majesty's Colonies in *America*, for a limited time, free of duty."

4. The 7 George III, cap. 5, "An Act for allowing the *importation* of Wheat and Wheat Flour from any part of *Europe* into this Kingdom, for a limited time, free of duty."

5. The 7 George III, cap. 8, "An Act for allowing the *importation* of Oats and Oatmeal, Rye and Ryemeal, into this Kingdom, for a limited time, free of duty."

6. The 7 George III, cap. 11, "An Act for allowing the *importation* of Wheat and Flour, free of duty, from any part of *Europe*, for a further time than is allowed by any Act made in this session of parliament, and for permitting the free importation of Barley, Barley-meal and Pulse into this Kingdom, for a limited time."

7. The 7 George III, cap. 22, "An Act for further allowing the *importation* of Wheat and Wheat Flour, Barley, Barleymeal, and Pulse, free of duty, into this Kingdom, from any part of *Europe*."

8. The 7 George III, cap. 30, "An Act for allowing the free importation of *Rice*, Sago Powder and Vermicelli, into this Kingdom from His Majesty's Colonies in North America, for a limited time."

9. The 7 George III, cap. 36, "An Act to continue so much of an Act made in the thirty-third year of the reign of his late Majesty, as relates to the free *importation* of Cochineal and Indigo, and for allowing the Bounties granted by any Acts of Parliament now in being upon the *exportation* of Corn and Malt declared or made for *exportation*, and Barley steeped and entered at the Excise Office to be made into Malt for exportation, for a limited time."

10. The 7 George III, cap. 45, "An Act for encouraging and regulating the Trade and Manufactures of the *Isle of Man*, and for the more easy supplying of the inhabitants there with a certain quantity of Wheat, Barley, Oats, Meal, and Flour, authorised by an Act made in the last session, to be transported to the said Island."

11. The 7 George III, cap. 54, "An Act (*inter alia*) for empowering His Majesty, with the advice of his Privy Council, to permit the *importation* of any sort of Corn or Grain, duty free, into this Kingdom, for a longer time than is permitted by any Act of this session of Parliament."

But this was not all. Owing to the high price of food and the riots and tumults that ensued, the privy council, on the 26th September, before the meeting of parliament (which usually then assembled at the commencement of the winter season) issued a proclamation, laying an embargo on the exportation of wheat and flour, and prohibiting the use of that grain in the distilleries. By this exercise of the dispensing power, under the plea of its being impracticable to take the advice of parliament—whilst the meeting of parliament had been by a like proclamation postponed from 16th September to 11th

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1767	November—Lord Chatham incurred much subsequent censure ; but there was finally enacted— 12. The 7 George III, cap. 7, “An Act for indemnifying such Persons as have acted for the service of the Public, in advising or carrying into execution the Order in Council of the 26th day of September last, for laying an embargo on all Ships laden with Wheat or Wheat Flour, and for preventing suits in consequence of the said embargo.”
'68	<p>The legislation of this year consisted of :—</p> <ol style="list-style-type: none"> 1. The 8 George III, cap. 1—“An Act to continue and amend the Act made in the last session of Parliament, to prohibit, for a limited time, the exportation of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit and Starch, and also the extraction of Low Wines and Spirits from Wheat and Wheat Flour.” 2. The 8 George III, cap. 2—“An Act to continue several Acts made in the last session of parliament, for allowing the importation of Wheat, Wheat Flour, Barley, Barley Meal, Pulse, Oats, Oatmeal, Rye, and Rye Meal, duty free ; and also so much of an Act made in the same session, as relates to the free importation of Rice, from His Majesty's colonies in <i>North America</i> ; and to allow the importation of Wheat and Wheat Flour from <i>Africa</i>, for a limited time, free of duty.” 3. The 8 George III, cap. 3—“An Act for the free importation of <i>Indian corn</i>, or Maize, from any of His Majesty's colonies in <i>America</i>, for a time therein limited.” 4. The 8 George III, cap. 4—“An Act to continue and amend an Act made in the fifth year of the reign of His present Majesty, intituled, ‘An Act for importation of Salted Beef, Pork, Bacon, and Butter, from <i>Ireland</i>, for a limited time ;’ and for allowing the importation of Salted Beef, Pork, Bacon, and Butter, from the British dominions in <i>America</i>, for a limited time.” 5. The 8 George III, cap. 24—“An Act to permit the exportation of certain quantities of <i>Malt</i>, belonging to certain merchants, in the county of Norfolk, and which were made for exportation between the 15th November, 1876, and the passing of this Act of last session for prohibiting the exportation of <i>Malt</i>.” 6. And in a special session held in May, of the 8 George III (sess. 1), cap. 1—“An Act for further continuuig certain laws, to prohibit for a limited time, the exportation of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit and Starch, and also the extraction of Low Wines and Spirits, from Wheat and Wheat Flour ; for further allowing the importation of Wheat and Wheat Flour, Barley, Barley Meal, and Pulse, free of duty, into this Kingdom, from any part of <i>Europe</i> ; and for allowing the importation of Oats and Oatmeal, Rye and Ryemeal, into this Kingdom, for a limited time, free of duty, and also for continuing such other laws as will expire before the beginning of the next session of Parliament.”
'69	<p>There were again several food enactments :—</p> <ol style="list-style-type: none"> 1. The 9 George III, cap. 1—“An Act to prohibit for a further time the exportation of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit and Starch ; and also the extraction of Low Wines and Spirits from Wheat, and Wheat Flour.” 2. The 9 George III, cap. 4—“An Act to allow for a further time, the free importation of <i>rice</i>, into this Kingdom from His Majesty's colonies of <i>North America</i>.” 3. The 9 George III, cap. 9—“An Act to continue an Act made in the eighth year of the reign of His present Majesty, intituled [8 George III, cap. 9], “An Act for importation of Salted Beef, Pork, Bacon and Butter from <i>Ireland</i>, for a limited time ; and for allowing the importation of Salted Beef, Pork, Bacon and Butter from the <i>British dominions in America</i> for a limited time.””

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.

1770 ... Again there were several measures relating to exportation and importation of grain, &c.

1. By 10 George III, cap. 1—"An Act for continuing an Act made in the last session of Parliament, to prohibit, for a further time, the *exportation* of Corn, Grain, Meal, Malt, Flour, Bread, Biscuit, and Starch; and also an extraction of Low Wines and Spirits from Wheat and Wheat Flour."

2. By 10 George III, cap. 2, the right to import certain salted provisions from *Ireland* and the *British* dominions in *America* was continued to 1st March, 1771.

3. The 10 George III, cap. 10—"An Act to permit the *exportation* of Malt."

4. A new feature, that of statistical returns of exports and imports, was introduced by 10 George III, cap. 39—"An Act for registering the prices at which Corn is sold in the several counties of Great Britain, and the quantity exported and imported"—it is recited: "Whereas a register of the prices at which corn is sold in the several counties of Great Britain will be of public and general advantage." It then enacts that justices at quarter sessions were to order weekly returns to be made of the prices of wheat, rye, barley, oats, beans, and bigg from not less than two or more than six markets in each county; and to appoint persons to make such returns. Meal-weighers in London to make return. An account of the quantities of corn exported and imported, and of the bounties and duties paid and received, was to be transmitted annually to the Treasury by the commissioners of customs.

'71 ... This year there was enacted various measures relating to food supply.

1. The 11 George III, cap. 1—"An Act to continue the prohibition of the *exportation* of Corn, Grain, Meal, Flour, Bread, Biscuit, and Starch, and also of the extraction of Low Wines and Spirits from Wheat and Wheat Flour for a further time; and also to prohibit the exportation of *Malt* for a limited time."—There were *exceptions* made in favour of vessels taking such stores as were necessary for their voyages; also for His Majesty's ships of war, &c., forces or garrisons; also as to such victuals carried coastwise; also for exportation from *Ireland* to Great Britain, or *vice versa*; or to Gibraltar, America, or British colonies in America, or to the British fishery there; also exception for *beans* exported to the British forts in Africa, or as to any of the said commodities exported by the East India Company to their forts; also as to wheat, flour, malt, barley, bread, biscuit, or peas exported from Southampton to Jersey, Guernsey, and Alderney, &c., for the use of the inhabitants there only, not exceeding 5,000 quarters in the whole; and for wheat, barley, oats, and meal or flour from Whitehaven or Liverpool to the Isle of Man for the use of the inhabitants there, not exceeding in the whole 2,500 quarters, of which *equal moieties* were to be shipped from Whitehaven and Liverpool; also for bread and biscuit, not exceeding fifteen tons, sent by the Committee of African Merchants to their forts, &c., in Africa. The commissioners of customs to return account to parliament of all corn, &c., so exported. There was to be no prohibition against exporting *rice*. This measure, in fact, mainly consisted of *exceptions* to the rule it laid down, and so indicates that difficulties were being felt.

2. By 11 George III, cap. 8, the *importation* of salted provisions from *Ireland* and *America* was permitted until 1st March, 1772.

3. A new feature was now introduced. By 2 George III, cap. 37—"An Act to prohibit the exportation of *Live Cattle* and other Flesh Provisions from Great Britain for a limited time"—viz., to the twentieth day after the commencement of the next session of parliament,

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1771	with certain exceptions in favour of ships of war, and in favour of cattle, &c., sent to <i>Gibraltar</i> , <i>Minorca</i> , or <i>America</i> .
'72	There were again several measures this year.
	1. The 12 George III, cap. 1, continued the Act against <i>exportation</i> , chapter 1, of last session, over to next session, with certain slight amendments.
	2. The 12 George III, cap. 2, continued the Act permitting <i>importation</i> of salt provisions from <i>Ireland</i> and <i>America</i> till 1st March, 1773.
	3. The 12 George III, cap. 60, allowed the importation of <i>rice</i> from the British plantations into the ports of <i>Bristol</i> , <i>Liverpool</i> , <i>Lancaster</i> , and <i>Whitehaven</i> "for immediate exportation to foreign parts."
'73	4. See <i>Forestallers</i> , &c., Table No. 12, for another Act of this year.
	There were again several important measures as to importation and exportation of food.
	1. The 13 George III, cap. 1—"An Act for allowing the <i>importation</i> of Wheat, Wheat Flour, Rye, Rye Meal, Barley, Barley Meal, Oats, Oatmeal, Peas, Beans, Tares, Callivancies, and all other sorts of Pulse from any part of <i>Europe</i> or <i>Africa</i> into this Kingdom for a limited time, <i>free of duty</i> "—viz., at any time before 1st January, 1774. Entry to be made of all such imports in the form heretofore in use, otherwise such wheat, &c., should be subject to duties previously payable.
	2. The 13 George III, cap. 2—"An Act for allowing the <i>importation</i> of Wheat, Wheat Flour, Indian Corn, Indian Meal, Biscuit, Pease, Beans, Tares, Callivancies, and all other sorts of Pulse from His Majesty's Colonies in <i>America</i> into this Kingdom for a limited time, <i>free of duty</i> "—viz., from 1st December, 1772, to 1st January, 1774. Entry to be made as formerly, or duties to be charged. Such grain might be carried coastwise.
	3. The 13 George III, cap. 3—"An Act to prohibit the <i>exportation</i> of Corn, Grain, Pease, Beans, Meal, Malt, Bread, Biscuit, and Starch, and also the extraction of Low Wines and Spirits from Wheat Flour for a limited time"—viz., till 1st January, 1774. After passing of this Act all grain loaded on any ship for exportation to be forfeited. The exceptions were much the same as in 11 George III, cap. 1.
	4. The 13 George III, cap. 4, continued the license to <i>import</i> salt provisions from <i>Ireland</i> and <i>America</i> till 1st March, 1774.
	5. The 13 George III, cap. 7—"An Act for allowing the free <i>importation</i> of <i>Rice</i> into this Kingdom from any of His Majesty's Colonies in <i>America</i> for a limited time, and for encouraging the making of Starch from <i>Rice</i> "—viz., at any time before 1st May, 1780.
	6. The legislature began to grow weary of such hand-to-mouth measures as had now continued over quite a series of years, and hence there was enacted the 13 George III, cap. 43—"An Act to regulate the <i>importation</i> and <i>exportation</i> of Corn." It is recited as follows:—
	"Whereas the several Acts of parliament heretofore made concerning the duties and bounties respectively payable on the importation and exportation of corn and grain have greatly tended to the advancement of tillage and navigation; yet nevertheless it having been of late years found necessary, on account of the small quantities of corn and grain in hand, and of the shortness of the crops, to suspend the operations of those laws by temporary statute, whereby the benefits derived from the said Acts of parliament have been during such emergencies withheld and suspended; and whereas the regulating the importation and exportation of corn and grain by a permanent law, under such general rules and provisions as might render for the time to come such temporary laws unnecessary, would afford encourage-

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D. 1773	ment to the farmer, be the means of increasing the growth of that necessary commodity, and of affording a cheaper and more constant supply to the poor, and preventing abuse in that article of trade. May it therefore please Your Majesty, &c."
	It was then enacted that no British wheat be exported when at 44s. per quarter; rye, peas, or beans when at 28s.; barley when at 22s.; nor oats when at 14s. per quarter, under penalty of forfeiture of 20s. per bushel, and the vessel in which the same should be carried. There were exceptions as to export to <i>Ireland</i> and to certain British forts and islands specified with great precision.
	After 1st July, 1774, as in 11 George III, cap. 1, the former scale of <i>bounties</i> for exports were to cease, and a new scale to take effect.
	7. The 13 George III, cap. 72—"An Act to permit the <i>free importation</i> of Cod Fish, Ling, and Hake caught and cured in Chaleur Bay, or any other part of the Gulf of <i>St. Lawrence</i> , or on the coasts of <i>Labrador</i> ."
	The produce of wheat in Great Britain was stated in the House of Commons to be 4,000,000 quarters, of which the whole, and above 100,000 imported quarters, were consumed.
'74	By 14 George III, cap. 64—"An Act to explain so much of an Act made in the last session of Parliament (intituled, &c.), as relates to the method of ascertaining the prices of Corn"—it is set forth that after 1st June this year the prices of corn, grain, &c., should mean the "average prices" under the regulations therein stated. In cases where the prices of grain rose within the prohibited schedule within twenty days after entry at custom house, the shipping might proceed.
'75	By 15 George III, cap. 1—"An Act to allow the importation of Indian corn and maize, under certain restrictions"—it is recited:— "That under the Act of 1773 (cap. 43), the mention of Indian corn was omitted," and it was therefore now enacted that this might be imported, paying 1d. per quarter, under the like regulations as barley in the Act of 1773.
'79	By 19 George III, cap. 25—"An Act for granting to His Majesty additional duties upon the produce of the several duties under the management of the respective companies of the Customs and Excise of Great Britain"—an additional duty of 5 per cent. of the former duty was laid on all goods imported into, or exported from, or carried coastwise in Great Britain.
'80	The 20 George III, cap. 31—"An Act for allowing a <i>bounty</i> on the <i>exportation</i> of British Corn and Grain in ships, the property of persons of any kingdom or State at amity with his majesty"—recites:— "Whereas much of the shipping of this kingdom, built in times of peace for the purposes of commerce, is now at the present time of war and hostilities, employed in transporting your majesty's troops and stores, and many ships and vessels, through the spirited exertions of your majesty's subjects, are converted into private ships of war, as also great numbers of seamen, taken from the merchant service, are in like manner employed, and whereas, from these and other effects of the war, the <i>exportation</i> of corn and grain from Great Britain is so far interrupted, that it cannot now with advantage to the farmer and merchant, notwithstanding the <i>bounty</i> granted thereon, be exported in British shipping, the master and two thirds at least of the mariners being your majesty's subjects." It was therefore enacted that exporters of British corn in vessels belonging to any State in amity with his majesty, were to be allowed half the usual bounty. The said bounty to be paid under the like conditions, and as for corn reported in British shipping. This Act was to continue until 25th March, 1781; but it was

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
	further continued by 21 George III, cap. 29, and 22 George III, cap. 13, until 25th March, 1783.
1781	By 21 George III, cap. 50—"An Act for further regulating and ascertaining the <i>importation</i> and <i>exportation</i> of Corn and Grain, within several ports and places therein mentioned"—so much of the Acts of 1685, 1732, 1766, and 1773 as related to determining the price of middling English wheat in Kent, Essex, and London was repealed, and the prices in these places were in future to be regulated by the prices ascertained in the city of London by the inspector of the returns of the factors in the corn exchange.
'82	By 22 George III, cap. 66—"An Act for granting to His Majesty additional duties upon the produce of the several duties under the management of the respective commissioners of the Customs and Excise in Great Britain"—from 25th July this year an additional duty of 5 per cent. of former duties was laid upon all goods imported into, or exported from, or carried coastwise in Great Britain.
'87	The 27 George III, cap. 13, was an Act for repealing the several duties of customs and excise, and granting other duties in lieu thereof. Under this Act a very small addition was made to the former duties on grain imported or exported. See supplemental table at end of this table.
'89	By 29 George III, cap. 58—"An Act for better regulating and ascertaining the importation and exportation of Corn and Grain; also for the better regulating the exportation of Starch and the importation of Rape Seed"—the regulations of the Act of 1781 were modified to the extent that the inspector of corn returns was to receive from every corn factor in London and the suburbs a weekly return of the corn brought into the Thames eastward of London Bridge which was sold by him during the preceding week. One halfpenny was to be charged on every "last" contained in such returns, or 1 <i>d.</i> if foreign corn; with many other most elaborate details.
'91	There was enacted 31 George III, cap. 30—"An Act for regulating the importation and exportation of Corn, and the payment of the duty on foreign Corn imported, and of the bounty on British Corn exported"—which recites: <p>"Whereas the laws now in force regulating the importation and exportation of corn, and the payment of the duty on foreign corn imported, and of the bounty granted on British corn exported, require amendment; and it is expedient that certain parts of the said laws should be continued, and new provisions made, and that the same should be comprised in one Act of Parliament."</p> <p>It therefore enacted the repeal of the Acts of 1685, 1688, 1732, 1770, 1773, 1781, 1789, and all other Acts relating to the importation of grain of all kinds. The provisions of the Act of 1663 as to buying corn to sell again, and laying it up in granaries, were also repealed. Then follow a long series of most elaborate regulations in view of the purposes of the Act, extending in all to 94 sections, now long since happily repealed. Permission was given to export from the port of Southampton to the Channel Isles 9,800 quarters of grain, meal, &c., within two years, and no more. <i>Malt</i> made for export exempted from operation of Act.</p>
'92	By an Order in Council, under date 9th November this year, the <i>exportation</i> of wheat or flour was prohibited until 1st March, 1793.
'93	In consequence of the last step, the formula of 1767 had to be repeated, and there was enacted 33 George III, cap. 3—"An Act for indemnifying all Persons who have been concerned in advising and carrying into execution an Order in Council respecting the exportation of Wheat and Wheat Flour, for preventing suits in consequence of the same, and for making further provisions relative thereto; and

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.

1793	also for authorising His Majesty to prohibit the exportation of Corn, Meal, Flour, Bread, Biscuit, and <i>Potatoes</i> , and to permit the <i>importation</i> of Corn, Meal, or Flour on the low duties"—which recites, "And whereas the said Order cannot be justified by law, <i>but was so much for the service of the public, and so necessary for the safety and preservation of His Majesty's subjects, that the same ought to be justified by an Act of parliament</i> , and all persons issuing, advising, or acting under or in obedience to the said Order respectively indemnified." All of which was accordingly done. Until 1st March, 1793, all wheat, &c., exported out of Great Britain, or shipped with that intent, to be forfeited, as also the vessel. There were exceptions in conformity with 31 George III, cap. 30.
'93	By 33 George III, cap. 65. The same session there was enacted an Act to amend the Act of 1791, whereby many of the provisions of that Act are repealed and others substituted, in regard to the receivership of "Corn returns," from which to deduce the weekly prices. This Act consisted of twenty-one sections, some of them very complex.
'95	There was enacted 35 George III, cap. 4—"An Act for enabling His Majesty to prohibit the <i>exportation</i> , and to permit the <i>importation</i> of Corn, and for allowing the <i>importation</i> of other articles of provision, for a limited time, <i>without payment of duty</i> ." His Majesty might order the taking out foreign corn from warehouses for home consumption. Certain articles might also be imported into Great Britain from any place, in British vessels, or vessels belonging to places in amity with His Majesty, duty free. The articles enumerated in this Act constitute the following extended list, in addition to the various kinds of grain, viz., beans, called kidney or French beans, tares, lentils, callivancies, and all other sorts of pulse; and also bulls, cows, oxen, calves, sheep, lambs and swine; beef, pork, mutton, veal, and lamb, whether salted or otherwise; bacon, hams, tongues, butter, cheese, potatoes, rice, sago, sago powder, tapioca, vermicelli, millet seed, poultry, fowls, eggs, game, and sour-crout.
'96	There were several measures relating to food supplies, one embodying an entirely new feature, viz., <i>Bounties on Imports</i> . 1. The 36 George III, cap. 3—"An Act to prohibit the <i>exportation</i> of Corn, Meal, Flour and Potatoes, and to permit the <i>importation</i> of Corn, and other articles of provision for a limited time <i>in any ships whatever</i> , without payment of duty." There was no new feature. 2. The <i>bounty system</i> was now to be tried in relation to <i>imports</i> , by the 36 George III, cap. 21—"An Act for allowing <i>bounties</i> for a limited time, on the importation into Great Britain of any Wheat, Wheat Flour, Indian Corn, Indian Meal, and Rye." It was, however, specified what maximum quantities might be so admitted from different parts of the globe, as: <i>a.</i> From Europe, south of Cape Finisterre, from the Mediterranean, or Africa, not exceeding 400,000 quarters (of 2½ cwt., avoirdupoise, per quarter), at a bounty of 20s. per quarter. <i>b.</i> From other parts of Europe to the extent of 500,000 quarters (same weight) a bounty of 15s. per quarter, or 4s. 6d. on every cwt. of wheat flour. <i>c.</i> From His Majesty's colonies, 500,000 quarters (same weight), a bounty of 20s. per quarter, or 6s. per cwt. on wheat flour. On all quantities in excess of those specified the bounties were to be 10s. per quarter only. A bounty of 5s. per quarter on Indian corn and meal, up to 500,000 quarters, and then reduced bounty; and a bounty of 10s. per quarter on rye, up to 100,000 quarters, and then reduced.

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D. 1796	<p>All such imports for bounties to be made before 30th September, 1796, and to be made at one or any of the following ports :—<i>London, Abergyswith, Beaumaris, Berwicka, Boston, Bristol, Carlisle, Chester, Chichester, Colchester, Cowes, Dartmouth, Dover, Exeter, Falmouth, Harwich, Hull, Ipswich, Lancaster, Liverpool, Lyme, Lynn, Maldon, Milford, Newcastle, Penzance, Plymouth, Poole, Portsmouth, Preston, Rochester, Sandwich, Southampton, Stockton, Sunderland, Swansea, Wells, Whitehaven, Whitby, Wisbeac', Yarmouth, Aberdeen, Ayr, Alloa, Campbletown, Dumfries, Dunbar, Dundee, Glasgow, including Port Glasgow, Greenock, Kirkaldy, Kirkcudbright, Leith, Lerwick, Montrose, and Wighton</i>, on foreign corn warehoused before the passing of this Act, and taken out within three months after the bounty to be paid.</p> <p>3. By 36 George III, cap. 56, the last-named Act is amended by the addition of the following ports to which shipments of grain might be made, viz., <i>Barnstaple, Biddiford, Bridgewater, Bridport, Cardiff, Cardigan, Carnarvon, Fowey, Newhaven, Scarborough, Shoreham, Weymouth, Borrowstowness, Perth, Grangeworth, and Port Dundas</i>.</p>
1796	<p>There were again several enactments on food supply—one suspending the <i>Bounty Act</i> of last session.</p> <p>1. The 37 George III, cap. 7—"An Act to continue for a limited time, and amend an Act made in the last session of parliament, intituled an Act [36 George III, cap. 3]; and for permitting Wheat, Wheat Flour, and Meal, imported in order to obtain the bounties granted by an Act of the last session of Parliament, but which have not been found fit for making Bread, to be used in the manufacture of Starch, Hair Powder, and Blue, or in the distillation of Low Wines and Spirits." This right to be extended to 1st February, 1797.</p> <p>2. The 37 George III, cap. 15—"An Act for granting to His Majesty certain duties of customs on goods, wares, and merchandise imported into, exported from, or brought and carried coastwise within Great Britain, except wines and coals"—an additional duty of 5 per cent. on former duties on goods imported, including grain (and 10 per cent. on certain other goods), was imposed.</p> <p>3. It seems that the bounty had done its work effectively, while the harvest prospects were also probably good, for by the 37 George III, cap. 83—"An Act to repeal so much of an Act passed in the present session of parliament, as prohibits the <i>exportation</i>, and permits the <i>importation</i>, duty free, of several sorts of Corn, and other articles made thereof"—And which received royal assent 18th June, it is recited, "and whereas since the passing of the said Act the prices of several of the sorts of corn therein mentioned, have been considerably diminished," therefore, after 16th June, "so much of the said Act as relates to <i>importation</i> and <i>exportation</i>, and the carrying coastwise of barley, beer or bigg, pease, oats, or any meal, flour, bread, biscuit, or malt made thereof, shall be, and the same is hereby repealed." No such articles entered for <i>exportation</i> before 6th February, 1798, to be entitled to bounty.</p> <p>4. The 37 George III, cap. 125—"An Act for authorising His Majesty to permit the <i>exportation</i> of an additional quantity of Wheat, Wheat Meal, or Flour, Rye, Barley, or Malt, or Bread, Biscuit, or Pease, to the <i>Islands of Guernsey, Jersey, and Alderney</i>, for the sustenance and use of the inhabitants of the said islands, for a limited time"—recited that it was expedient to allow a greater quantity of corn and other articles to be exported to the Channel Islands than had been provided for under the Acts of 1791 and 1793 (cap. 65), and the quantity was extended to 10,000 quarters.</p>
1797	<p>There was enacted 38 George III, cap. 10—"An Act to continue until</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1797	the expiration of six weeks from the commencement of the next session of parliament, so much of an Act passed in the session of parliament of the 36th and 37th years of his present Majesty, cap. 7, viz., on the 11th November, 1796, as relates to the <i>exportation</i> and carrying coastwise of Wheat and Rye, and to the <i>importation</i> of several articles of provisions." It provided that foreign wheat or rye, or the flour, &c., thereof, arriving at any port in Great Britain by 31st December, 1797, might be imported <i>duty free</i> , if proved to have been ready for sea at certain periods. During the recess of parliament His Majesty might suspend the provisions of this Act.
	By another Act of this same session, 37 George III, cap. 110, an additional duty of 5 per cent. upon former duties upon grain, &c., was imposed.
'99	There was enacted: 1. 39 George III, cap. 87—"An Act for enabling His Majesty to prohibit the <i>exportation</i> , and permit the <i>importation</i> of Corn, and for allowing the importation of other articles of provision, <i>without payment</i> of duty, to continue in force until six weeks from the commencement of the next session of parliament." But this power was not to extend to foreign corn warehoused on the conditions of 31 George III, cap. 30, and not taken out for home consumption. Copies of any order of council to be laid before parliament.
	2. The 39 George III, cap. 88—"An Act for erecting the County of <i>Edinburgh</i> into a separate district for the purpose of regulating the <i>importation</i> and <i>exportation</i> of Corn." This was a modification of the provisions of the 33 George III, cap. 65.
1800	This year was prolific of legislation on the famine question.
	1. The 39 and 40 George III, c. 9—"An Act to continue until 30th September 1800, an Act of the last session of parliament for enabling His Majesty to prohibit the exportation of Corn, and for allowing the <i>importation</i> of other articles of provisions without payment of duty."
	2. The 39 and 40 George III, cap. 29—"An Act for granting <i>bounties</i> on the <i>importation</i> of Wheat, Wheaten Flour, and Rice until the 1st day of October, 1800." This bounty was to be paid according to the price of wheat as advertised in the <i>Gazette</i> . (See cap. 91.)
	3. The 39 and 40 George III, cap. 35—"An Act for granting a <i>Bounty</i> on the importation of <i>Oats</i> until 1st October, 1800." This Bounty to be under the management of the Commissioners of Customs.
	4. The 39 and 40 George III, cap. 53—"An Act for granting a <i>Bounty</i> on the <i>importation</i> of <i>Rye</i> until the 15th day of October, 1800." Bounty to be regulated by the average price of rye.
	5. The 39 and 40 George III, cap. 58—"An Act for further continuing and amending an Act made in the last session of parliament for enabling His Majesty to prohibit the <i>exportation</i> and permit the <i>importation</i> of Corn; and for allowing the importation of other articles of provisions without payment of duty." The Act to be continued for forty days after commencement of next session.
	6. The 39 and 40 George III, cap. 91—"An Act to prohibit until the 15th day of October, 1800, the <i>exportation</i> of <i>Rice</i> ." (See cap. 22.) No rice was to be exported after 15th July this year.
	7. The 39 and 40 George III, cap. 107—"An Act to permit until six weeks after the commencement of the next session of parliament. the importation of <i>Swedish Herrings</i> into Great Britain."
	Same year, in the autumn session of parliament, there were enacted:—
	1. The 41 George III, cap. 1—"An Act to prohibit until the 1st day of November, 1801, <i>exportation</i> of <i>Rice</i> ; and to indemnify all

TABLE X.—Restrictions on the Export or Import of Grain—Contd.

A.D.

1800

persons who have been concerned in the preventing the exportation thereof, or in the non performance of any contracts and agreements that shall not have been performed in consequence thereof."

2. Here we have a more comprehensive measure than any of the preceding, as it applies to *food generally*. The 41 George III, cap. 2—"An Act to authorise His Majesty from time to time to prohibit the exportation of Provisions or Food." His Majesty was allowed by Order of Council, from time to time to prohibit the exportation of any article used as food by man. There were certain exceptions not material to mention now. All such orders to be laid before parliament.

3. The 41 George III, cap. 5—"An Act for continuing, until the expiration of forty days after the commencement of the first session of parliament that shall be begun and holden after the 1st day of September, 1801, several laws relating to the prohibiting the *exportation*, and permitting the *importation* of Corn and other articles of Provisions, without payment of duty. . . . [See Table XIII] in that part of Great Britain called *Scotland*."

4. The 41 George III, cap. 10—"An Act for granting *Bounties* on the importation of Wheat, Barley, Rye, Oats, Pease, Beans, and Indian Corn, and of Barley, Rye, Oat and Indian Meal, and Wheaten Flour and Rice." The bounty was to be paid for grain imported between 1st December, 1800, and 1st October, 1801, in British vessels, or vessels belonging to States at amity with His Majesty. The bounties were to be regulated according to average price in *Gazette*; and every corn factor in *London* or the suburbs was to make returns of prices and quantities of his purchases in forms provided under the Act. These to be sent to the lord mayor. This was a highly technical Act, consisting of 29 clauses and schedule.

5. The 41 George III, cap. 11—"An Act to permit, until the 1st day of October, 1801, the *importation* of Herrings and other *Fish*. The produce of the fishery carried on in *Nova Scotia*, *New Brunswick*, *Newfoundland*, and the coast of *Labrador*, into this Kingdom *without payment of duty*."

6. The 41 George III, cap. 12—"An Act for making better provision for the maintenance of the poor, and for *diminishing the consumption of Bread Corn*, by directing the manner of applying *Parish Relief*, until the 6th day of November, 1801, and from thence until the end of six weeks after the meeting of the then next session of parliament."

7. In the votes for *supplies* this year, 41 George III, cap. 14, was included one for 50,000*l.*, for *laying in stores of fish and distributing them throughout the kingdom*.

8. The 41 George III, cap. 18, authorising the importation of Swedish herrings into this kingdom until 1st October, 1801.

9. The 41 George III, cap. 19—"An Act to remove doubts arising upon the construction of an Act of this session of Parliament, intituled [the 41 George III, cap. 10]." All grain was to be inspected to see if merchantable before bounty paid.

Note.—As the result of the *legislation* of this year, we have here given sixteen separate measures relating to food supplies, and under several other tables (especially Nos. 10 and 13) will be found other enactments directly the result of the then system of legislating on *famines*.

'01

There were several measures relating to food supplies enacted this session, the first of the parliament of the United Kingdom, which causes some confusion in the numbering of the Acts: we shall add "(United Kingdom)" after Acts of this session.

1. The 41 George III, cap. 13 (United Kingdom)—"An Act for increasing the *bounties* granted by an Act of the last session of par-

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1801	<p>liament, on Flour <i>imported from America</i>, in ships which shall have been cleared out between certain periods." These bounties were on a sliding scale, regulated by the price of the grain.</p> <p>2. We have the new feature of <i>granting bounty on fish</i>. Thus, by 41 George III, cap. 77 (United Kingdom)—"An Act for allowing until the 1st day of August, 1802, the <i>importation</i> of certain <i>Fish</i> from <i>Newfoundland</i> and the coast of <i>Labrador</i>, and for granting a bounty thereon." Salted salmon and cod might be imported by "British subjects," a bounty of 3s. per quintal or cwt. being paid. Acts for securing duty on salt not to be affected.</p> <p>3. The 41 George III, cap. 77 (United Kingdom) continued the several laws relating to encouraging the fisheries of <i>Newfoundland, &c.</i></p> <p>4. The 41 George III, c. 99 (United Kingdom)—"An Act for granting bounties for taking and bringing Fish to the cities of <i>London and Westminster</i>, and other places in the <i>United Kingdom</i>," extended the system of bounties, which, however, were not to exceed 500<i>l.</i> to any one vessel, or 30,000<i>l.</i> in the whole. An account to be laid before parliament.</p>
'02	<p>There were again several enactments on food supplies, two of which fall to be noticed in this table, viz. :—</p> <p>1. The 42 George III, cap. 13—"An Act to continue until the 1st day of January, 1803, and amend an Act of the 39th year of the reign of His present Majesty, for prohibiting the <i>exportation</i> and permitting the <i>importation</i> of Corn, and for allowing the importation of other articles of provision <i>without payment of duty</i>; and to continue for the same period an Act of the last session of parliament for prohibiting the <i>exportation</i> from <i>Ireland</i> of Corn and Potatoes, or other provisions, and for permitting the <i>importation</i> into <i>Ireland</i> of Corn, Fish, and provisions without payment of duty." Under which His Majesty in council might prohibit the exportation of any article of provisions.</p> <p>2. The 42 George III, cap. 35—"An Act for regulating, until the 15th day of February, 1803, the prices at which Grain, Malt, and Flour may be <i>exported</i> from <i>Great Britain</i> to <i>Ireland</i>, and from <i>Ireland</i> to <i>Great Britain</i>." The right to export or import being regulated by the prices, as ascertained according to 31 George III, cap. 30.</p>
'03	<p>This year produced several new measures, viz. :—</p> <p>1. The 43 George III, cap. 12—"An Act to continue until the 1st day of January, 1804, several laws relating to the prohibiting the <i>exportation</i> and permitting the <i>importation</i> of Corn, and for allowing the importation of other articles of provision without payment of duty."</p> <p>2. The 43 George III, c. 13—"An Act to continue until the 1st day of January, 1804, so much of an Act made in 41st year of the reign of His present Majesty, as relates to the prohibiting the <i>exportation</i> from <i>Ireland</i> of Corn and Potatoes, or other provisions, and for permitting the <i>importation</i> into <i>Ireland</i> of Corn, Fish, and provisions without payment of duty."</p> <p>3. Here we have a further refinement of legislation in the 43 George III, cap. 14—"An Act for continuing until the 1st day of July, 1803, an Act made in the 42nd year [42 George III, c. 35]; and to permit from and after the passing thereof, until the said 1st day of July, 1803, the exportation of <i>Seed Corn</i> from <i>Great Britain</i> to <i>Ireland</i>, and the importation of <i>Malt</i> into <i>Great Britain</i> from <i>Ireland</i>." Seed corn, of British growth, might be exported from <i>Great Britain</i> to <i>Ireland</i>, in British or Irish ships, whatever might be the average price of corn; with certain special regulations when the average price of corn should be higher than that at which corn was then allowed to be exported to <i>Ireland</i>.</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D. 1803 ...	<p>4. By 43 George III, cap. 68—"An Act to repeal the duties of customs payable in Great Britain, and to grant other duties in lieu thereof"—a slightly increased duty was imposed upon grain imported.</p> <p>5. And by another Act of the same session, 43 George III, cap. 70—"An Act for granting to His Majesty, during the present war and until the ratification of a definite treaty of peace, additional duties on the importation and exportation of certain goods, wares, and merchandise, and on the tonnage of ships and vessels in Great Britain," under which slightly additional duties were imposed on grain. See table at end of this table.</p> <p>6. By the 43 George III, cap. 78, the Acts of 42 George III, cap. 35, and 43 George III, cap. 14, were continued until 1st July, 1804.</p> <p>7. By 43 George III, cap. 105—"An Act to permit the exportation, for two years, of a certain quantity of Corn, Grain, Meal, Flour, Bread, Biscuit or Pulse, to the Islands of <i>Guernsey</i>, <i>Jersey</i> and <i>Alderney</i>, from other Ports in England, as well as the Port of Southampton, under certain restrictions"—it is enacted that, while the places of shipment may be increased, the total quantity of 9,800 quarters is not to be exceeded.</p>
'04 ...	<p>1. By 44 George III, cap. 53—"An Act for granting to His Majesty during the present war, and for six months after the expiration thereof by the ratification of a definite treaty of peace, additional duties on the importation of certain goods, wares, and merchandises into Great Britain, and on goods, wares, and merchandise brought or carried coastwise within Great Britain"—the increased duties on grain were considerable. See table at end.</p> <p>2. By 44 George III, cap. 4, the 39 George III, cap. 82, was further continued until 25th March, 1705.</p> <p>3. By 44 George III, cap. 109—"An Act to regulate the <i>importation</i> and <i>exportation</i> of Corn and the bounties and duties payable thereon," so much of the Act of 1791 as related to the prices at which corn might be exported or imported to Great Britain, &c., was repealed, and new regulations as to the average prices at which importation and exportation should be permitted were enacted. This was not to extend to the intercourse of corn between Great Britain and <i>Ireland</i>.</p>
'05 ...	<p>1. By 45 George III, cap. 29—"An Act for granting to His Majesty additional duties within Great Britain on certain goods and merchandize imported into or brought coastwise"—a further addition was made to the duty on grain. See table.</p> <p>2. By 45 George III, cap. 63, the Act of 1803 (cap. 105) was made perpetual.</p> <p>3. By 45 George III, cap. 86—"An Act to explain and amend the Act made in the last session of parliament to regulate the <i>importation</i> and <i>exportation</i> of Corn, and the bounties and duties payable thereon," some of the regulations of the Act of 1804 were repealed, and it was enacted that the importation and exportation of corn, &c., into and from Great Britain should be regulated by the average prices of the twelve maritime districts of the east and west as ascertained by the returns required by the Act of 1791. Orders in Council as to importation of corn from British colonies in America to continue in force for six months.</p>
'06 ...	<p>1. By 46 George III, cap. 42—"An Act for granting to His Majesty during the present war and for six months after the expiration thereof by the ratification of a definitive treaty of peace, additional duties on certain goods, wares, and merchandise imported into and exported from, or brought or carried coastwise within Great Britain"—further additional duties were imposed upon grain imported, more especially when the price here did not exceed 60s. per quarter. See table.</p>

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1806 ...	2. By 46 George III, cap. 97—"An Act to permit the free <i>interchange</i> of every species of Grain between Great Britain and Ireland," it was recited, "Whereas it is expedient that the free importation and exportation of all corn and grain, meal, flour, bread and biscuit, reciprocally to and from <i>Great Britain and Ireland</i> should be allowed, and that all restraints, duties, and bounties relating thereto should cease;" whereupon it was enacted that all bounties and duties payable on interchange of corn between these two divisions of the kingdom should cease.
'09 ...	By 49 George III, cap. 98—"An Act for repealing the several duties of customs chargeable in Great Britain, and for granting other duties in lieu thereof," under "corn," in the schedule of this Act was given the duties chargeable on each variety of grain imported, with a column of "temporary or war duty" in addition, ranging from 8s. 4d. down to 2d. per quarter for wheat, and for other grain in proportion.
'13 ...	A select parliamentary committee was appointed this year to inquire into the state of the laws affecting the corn trade. This committee recommended in its report (dated 11th May) a very great increase of the prices at which exportation was allowable, and when importation free of duty might take place. It will be seen by Table XIV that the home price of corn was now very high, and hence this committee exhibited a marked solicitude to exclude all foreigners from competition with home growers. Parliament happily did not indorse this view.
	By 53 George III, cap. 33—"An Act for granting certain additional duties of customs [on goods, &c.] imported into, and exported from Great Britain"—a very considerable addition was made to the duty on imported grain when at prices not exceeding 6s. here. See table at end of this table.
'14 ...	This year a more enlightened policy was inaugurated in a series of resolutions voted by the House of Commons, declaring that it was expedient to repeal the bounty on exportation of grain, to permit the free exportation whatever might be the home price, and to impose a graduated scale of duties on the importation of foreign corn. Corn imported from Canada, or from the other British colonies in North America, only to pay half the duties of that from other places. Two Bills embodying these provisions were introduced to the House, but one only was passed, viz.: 54 George III, cap. 69—"An Act to permit the <i>exportation</i> of Corn, Grain, Malt, and Flour from any part of the United Kingdom, without payment of duty or receiving of bounty." See 1827.
'15 ...	By 55 George III, cap. 26—"An Act to amend the laws now in force for regulating the <i>importation</i> of Corn," it is recited: "Whereas it is expedient to amend the laws now in force relating to the importation of and trade in corn," and then enacted that foreign corn, meal, or flour might be respectively imported into the United Kingdom "for home consumption," under and subject to the provisions and regulations then in force, without payment of any duty, whenever wheat should be at or over 8os. per quarter, rye, peas, and beans, 5os., barley "bere or bigg" 4os., and oats 27s. per quarter. There was, however, an exception in favour of the importation of corn, &c., from the "British Colonies in North America." From thence wheat might be brought in when the price was at or above 67s. per quarter, rye, pease, and beans, 44s., barley, bere or bigg, 33s., and oats, 22s. per quarter. At other times, indeed, foreign corn, &c., might be brought in and warehoused; <i>but it could only be taken out of warehouse for consumption when the prices were at or above those stated.</i> This was known as Mr. Robinson's Act. There was much public disturbance while the measure was before parliament.
'17 ...	By 57 George III, cap. 27—"An Act for repealing the duties of

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1817	customs on Buckwheat imported into this kingdom, and for granting other duties, until the 25th day of March, 1821, in lieu thereof"—the former duties were repealed, and instead thereof a new duty of 10s. per quarter, irrespective of the price of the grain. This wheat might be warehoused, and duty paid when taken out for consumption.
'21	By 1 and 2 George IV, cap. 87—"An Act to repeal certain Acts, &c., for regulating the <i>importation</i> and <i>exportation</i> of Corn, Grain, Meal and Flour, into and from Great Britain, and to make further provisions in lieu thereof," the Acts of 1791, 1793, 1804, and 1805 were repealed, and a new mode of obtaining weekly returns of the price of corn from one hundred and forty-eight towns specified in the statute was enacted. This Act consisted of fifty sections. No ground corn (except wheat, meal, or flour and oatmeal), nor malt, to be <i>imported</i> .
'22	By 3 George IV, cap. 60—"An Act to amend the laws relating to the <i>importation</i> of corn," an attempt was made to meet the rise or fall in prices of grain consequent upon importation and exportation under the previous Acts, more especially that of 1815.
'25	<p>1. By 6 George IV, cap. 64—"An Act to alter for one year, and until the end of the next session of parliament, the duty on Wheat, the produce of the British possessions in <i>North America</i>," under which all duties upon the same were suspended.</p> <p>2. The 6 George IV, cap. 65—"An Act to allow until the 15th day of August, 1825, the entry of warehoused Corn, Grain, and Wheaten Flour for home consumption, on payment of duty"—enacted that foreign corn warehoused before 13th May, 1822, and wheaten flour warehoused under 5 George IV, cap. 70, might be taken out for home consumption, at the times mentioned in the Act, notwithstanding the 55 George III, cap. 26.</p> <p>3. By 6 George IV, cap. 111—"An Act for granting duties of customs"—duties on buckwheat and Indian corn were imposed, viz., buckwheat 14s. per quarter, and Indian corn per scale.</p>
'26	<p>By 7 and 8 George IV, cap. 3—"An Act to confirm an order in council for allowing the Importation of foreign Oats, Oatmeal, Rye, Pease and Beans; to indemnify all persons who have advised or acted in execution of the same; and to permit the importation of such articles until 15th February, 1827," we arrive at a more complete idea of the inextricable confusion which was resulting from modern attempts to regulate the price of food by Act of parliament.</p> <p>1. By 7 George IV, cap. 70—"An Act to permit foreign Corn, Meal and Flour warehoused, to be taken out for home consumption, until the 16th day of August, 1836," and grain (although not admissible under 3 George IV, cap. 60), warehoused, &c., on or before 2nd May, might be entered for home consumption, until 16th August, 1826; but not more than one-half might be entered before 1st July, 1826; and not more might be entered after this day than was entered before it.</p> <p>2. By 7 George IV, cap. 71—"An Act to empower His Majesty to admit foreign Corn for home consumption under certain liabilities until the 1st day of July, 1827, or for six weeks after the commencement of the then next ensuing session of parliament, if parliament shall not then be sitting." His Majesty by order in council might admit warehoused wheat or flour for home consumption on payment of such duty as shall be therein declared, as to what was warehoused before 2nd May; duty not to exceed that paid by 3 George IV, cap. 60.</p>
'27	By 7 and 8 George IV, cap. 57—"An Act to permit until the 1st May, 1828, certain Corn, Meal, and Flour to be entered for home consumption," it was recited:

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.

1827

"Whereas it is expedient to permit for a limited time certain corn, grain, meal, and flour to be entered for home consumption, upon payment of the respective duties hereinafter mentioned, although such corn, grain, meal, or flour may not, at the time of such entry, be admissible for home consumption under the provisions of the laws now in force for regulating the importation of corn, or may be admissible only on payment of higher duties."

Thus when the price was 62*s.* and under 63*s.* per quarter, the duty was to be 1*l.* -*s.* 8*d.*; and for every 1*s.* of advance in price the duty was to be decreased 2*s.*, until at the price of 72*s.* the import duty would only be 1*s.* per quarter. But when the price was under 62*s.*, the duty was to be 1*l.* 2*s.* 8*d.* Barley and oats were regulated in a like manner. This was really a trial trip for the new sliding scale of 1828. [The first "sliding scale" as to duties on grain was introduced in 1660.]

In the same year there was enacted 7 and 8 George IV, cap. 58—"An Act to make provision for ascertaining from time to time the average price of British Corn," by which the Act of 1821 is repealed (except in so far as it repealed the Acts named therein), and weekly returns of the prices of British corn were to be made from a long list of towns therein mentioned. A comptroller was to be appointed, and a deputy if necessary; and an inspector and deputy in London, who were not to be millers or dealers. The average prices when ascertained as the Act directs were to be published in the *London Gazette*. The Act had forty-two clauses, with a full measure of penalties for non-compliance.

'28

By 9 George IV, cap. 60—"An Act to amend the laws relating to the importation of Corn—" there came into force what was long designated as the "sliding scale," whereby wheat was allowed to be imported from any foreign country on payment of a duty of 1*l.* 5*s.* 8*d.* per quarter, whenever the average price of all England was under 62*s.* and not under 61*s.* When the price was 62*s.* and under 63*s.*, the duty was to be 1*l.* 4*s.* 8*d.*; and thence it gradually reduced as the price rose, until it fell to 1*s.* when the average price was 73*s.* and upwards. A scale was also applied on the same principle for barley, oats, rye, pease, beans, meal, &c. This was the beginning of the end. This Act repealed the Acts of 1815, 1822, the second Act of 1827, and so much of the Act of 1825 as related to buckwheat and Indian corn. There was a special scale of duty for grain imported "from any British possession in North America, or elsewhere out of Europe," viz., when wheat was under 67*s.* per quarter, the duty was to be 5*s.*; when above, 6*d.* Barley under 34*s.* per quarter, 2*s.* 6*d.* duty; above, 6*d.* Oats up to 25*s.* per quarter, 2*s.*; over, 6*d.* Rye, pease and beans up to 41*s.*, duty 3*s.*; over, 6*d.* There were new regulations for ascertaining average prices. The Act consisted of forty-eight sections and a schedule.

'35

By 5 and 6 William IV, cap. 13—"An Act to regulate the importation of Corn into the Isle of Man—" it is made manifest that whereas the produce of the Isle of Man could be imported into the United Kingdom without payment of any duty (and none of the many Acts recited had levied any duty upon foreign grain imported there), that a pretty brisk trade had resulted in the shape of importation to, and exportation from thence to other parts of the United Kingdom. This "weak place" was now stopped—the duties were extended to it.

'40

This year, on the 18th September, the Anti-Corn Law League, which sprang from various metropolitan and provincial associations, was founded in *Manchester*. Its first active supporters were Charles Villiers, Richard Cobden, John Bright, &c.

'42

By 5 and 6 Victoria, cap. 14—"An Act to amend the laws for the importation of Corn"—the Act of 1828 was repealed, and new pro-

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.	
1842	visions made in lieu thereof. This was known as the "reduced sliding scale Act." The duty on wheat imported from any foreign country, when the price was under 50s. in the United Kingdom, was to be 1 <i>l.</i> , reducing 1s. as the price advanced up to 73s. and beyond, when the minimum duty of 1s. per quarter was reached. For barley when under 26s. a duty of 11s., reducing with the advance of price up to 37s., when 1s. minimum duty. Oats under 19s. duty of 8s., reducing with advance of price until 27s., when the minimum duty became 1s. For rye, peas, and beans under 30s., duty 11s. 6 <i>d.</i> , reducing with increase of price to minimum of 1s. Meal, &c., correspondingly graduated. But when grain was imported from British possessions, wheat under 55s. paid a duty of 5s., 58s. and upwards, 1s. Barley under 28s., duty 2s. 6 <i>d.</i> , graduated to 6 <i>d.</i> when price 31s. and upwards. Oats under 22s., 2s. duty, graduated to 23s. when duty 6 <i>d.</i> Rye, pease and beans, under 30s., duty 3s., graduating to 34s., when duty 6 <i>d.</i> Meal, &c., correspondingly graduated. Additional regulations as to corn returns; officers of excise to act as inspectors; and where any foreign country should unfairly surcharge British vessels carrying grain, &c., Her Majesty might prohibit importation from such country. Accounts of corn imported, and of duty, and rates of duty, to be published monthly. An exception in favour of the universities of Oxford and Cambridge as to appointment and dismissal of inspectors of corn returns for those places (section 14). There were forty-five clauses and two schedules to this Act.
'46	The end was now near at hand. The failure of the potato crop in <i>Ireland</i> at this period lent a force to the free-trade movement in grain which years of mere controversial argument would not have given it; and finally this year there was enacted: The 9 and 10 Victoria, cap. 22—"An Act to amend the laws relating to the importation of Corn"—it was enacted that on and after 1st February, 1849, the duties upon all foreign corn imported into Great Britain and the Isle of Man should be as follows:—upon wheat, barley, bere or bigg, oats, rye, pease, and beans, 1s. per quarter; and upon meal from any of the same 4½ <i>d.</i> per cwt. But until that date the duty on wheat imported "from any foreign country" was to be as follows: when the average price under 48s., duty 10s., decreasing as the price increased to 53s. and upwards, when the minimum duty of 4s. per quarter came into force. A similar scale of graduation for other kinds of grain.
'69	By 32 Victoria, cap. 14—"An Act to grant certain duties of customs and inland revenue, and to repeal and alter other duties of customs and inland revenue"—under section 4 the duties and customs chargeable upon corn and meal in all its numerous varieties, including arrowroot, cassava powder, mandioca flour, hair powder, semolina, tapioca, vermicelli, &c., &c., were for ever swept away, as if in vengeance for the barbarities legislation in their assumed behalf had previously invoked. The remaining "shilling duty," on grain, left under the Act of 1846, was the principal item affected. So long as it remained, a host of vexations in regard to the food substances already named, and many others, still cropped up. The full measure of free trade in food was only now realised.

Note.—We have felt that the record of famine legislation could never be rendered complete by any means short of recording, as we have done, the titles and substances of the Acts enumerated in this and the preceding tables. What a mass of wasted legislative energy is here represented; and now every line of it has been swept off our statute book!—thanks to the labours of the Statute Law Revision Commission.

TABLE X.—*Restrictions on the Export or Import of Grain—Contd.*

A.D.

1869

The following short summary of the effect of such of the statistics, in the preceding table, as make the duty payable on foreign wheat imported depend upon the price of wheat at home, will supplement the information in the table, which was often curtailed in view of space, and of preventing seeming repetition.

Supplement to TABLE X.

		Rates of Duty per Imperial Quarter on the <i>Importation</i> of Foreign Wheat when the Price of British Wheat per Quarter was at															
Years	Acts.	5os.		55s.		6os.		65s.		7os.		75s.		8os.		85s.	
		s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1660	12 Car. II, c. 4.....	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$	—	4 $\frac{1}{8}$
'70	22 „ c. 13	16	6	16	6	8	3	8	3	8	3	8	3	8	3	—	4 $\frac{1}{8}$
'99	{ 9 and 10 Wm. III, c. 23	16	10 $\frac{1}{8}$	16	10 $\frac{1}{8}$	8	7 $\frac{1}{8}$	8	7 $\frac{1}{8}$	8	7 $\frac{1}{8}$	8	7 $\frac{1}{8}$	8	7 $\frac{1}{8}$	—	8 $\frac{1}{4}$
1703	2 and 3 Anne, c. 9.....	16	11 $\frac{1}{2}$	16	11 $\frac{1}{2}$	8	8 $\frac{1}{2}$	8	8 $\frac{1}{2}$	8	8 $\frac{1}{2}$	8	8 $\frac{1}{2}$	8	8 $\frac{1}{2}$	—	9 $\frac{5}{8}$
'04	3 „ 4 „ c. 5.....	17	2 $\frac{1}{4}$	17	2 $\frac{1}{4}$	8	11 $\frac{1}{4}$	8	11 $\frac{1}{4}$	8	11 $\frac{1}{4}$	8	11 $\frac{1}{4}$	8	11 $\frac{1}{4}$	1	— $\frac{3}{8}$
'47	21 Geo. II, c. 2	17	6 $\frac{3}{8}$	17	6 $\frac{3}{8}$	9	3 $\frac{3}{8}$	9	3 $\frac{3}{8}$	9	3 $\frac{3}{8}$	9	3 $\frac{3}{8}$	9	3 $\frac{3}{8}$	1	4 $\frac{1}{2}$
'74	13 Geo. III, c. 43.....	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$
'79	19 „ c. 25.....	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$
'82	22 „ c. 66.....	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$	—	6 $\frac{1}{5}$
'87	27 „ c. 13.....	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$
'91	31 „ c. 30.....	25	— $\frac{3}{32}$	2	6 $\frac{1}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$	—	6 $\frac{3}{10}$
'96	37 „ c. 15.....	26	3 $\frac{1}{10}$	2	8 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$	—	6 $\frac{1}{2}$
'97	37 „ c. 110.....	27	6 $\frac{1}{10}$	2	10 $\frac{1}{32}$	—	6 $\frac{1}{10}$	—	6 $\frac{1}{10}$	—	6 $\frac{1}{10}$	—	6 $\frac{1}{10}$	—	6 $\frac{1}{10}$	—	6 $\frac{1}{10}$
1803	{ 43 „ c. 68 and 70	28	1 $\frac{9}{32}$	2	10 $\frac{1}{10}$	—	6 $\frac{3}{32}$	—	6 $\frac{3}{32}$	—	6 $\frac{3}{32}$	—	6 $\frac{3}{32}$	—	6 $\frac{3}{32}$	—	6 $\frac{3}{32}$
'04	44 Geo. III, c. 53.....	31	3 $\frac{1}{8}$	3	2 $\frac{1}{32}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$
'04	44 „ c. 109.....	31	3 $\frac{1}{8}$	31	3 $\frac{1}{8}$	31	3 $\frac{1}{8}$	3	2 $\frac{1}{32}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$
'05	45 „ c. 29.....	31	10 $\frac{5}{8}$	31	10 $\frac{5}{8}$	31	10 $\frac{5}{8}$	3	3 $\frac{1}{10}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$	—	7 $\frac{3}{4}$
'06	46 „ c. 42.....	33	11 $\frac{5}{8}$	33	11 $\frac{5}{8}$	33	11 $\frac{5}{8}$	3	6	—	8 $\frac{2}{5}$	—	8 $\frac{2}{5}$	—	8 $\frac{2}{5}$	—	8 $\frac{2}{5}$
'09	49 „ c. 98.....	34	4 $\frac{1}{2}$	34	4 $\frac{1}{2}$	34	4 $\frac{1}{2}$	3	5 $\frac{1}{4}$	—	8 $\frac{1}{4}$	—	8 $\frac{1}{4}$	—	8 $\frac{1}{4}$	—	8 $\frac{1}{4}$
'13	53 „ c. 33.....	40	9 $\frac{7}{32}$	40	9 $\frac{7}{32}$	40	9 $\frac{7}{32}$	4	1	—	9 $\frac{2}{32}$	—	9 $\frac{2}{32}$	—	9 $\frac{2}{32}$	—	9 $\frac{2}{32}$
'15	55 „ c. 26.....	—	—	—	—	—	prohibited	—	—	—	—	—	—	—	—	—	free
'22	3 Geo. IV, c. 60 {	prohibited										12	4 $\frac{1}{4}$	12	4 $\frac{1}{2}$	5	1 $\frac{1}{2}$
'25	6 „ c. 65.....	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$	10	3 $\frac{1}{4}$
'26	7 „ c. 70.....	12	—	12	—	12	—	12	—	12	—	12	—	12	—	12	—
'27	{ 7 and 8 Geo. IV, c. 57.....	44	8	34	8	24	8	14	8	4	8	1	—	1	—	1	—
'28	9 Geo. IV, c. 60	36	8	31	8	26	8	21	8	10	8	1	—	1	—	1	—
'42	5 Vict., sess. 2, c. 14	20	—	17	—	12	—	7	—	4	—	1	—	1	—	1	—

X.—Currency Restrictions.

In my Table of Famines there are several attributed directly to the debasing of the coinage, more particularly those of A.D. 1124, 1248, 1390, and 1586, while most authors who have written upon food supplies or upon prices, have laid great stress upon the effects of a restricted or abundant currency. Table XIV in the present paper frequently attributes the high price of wheat to the scarcity of money.

Aristotle, in his "Economics," written B.C. 350 (Book II, chapter 24), gives an account of the manner in which Timotheus made a coinage of brass answer the purposes of his army until victory had secured a supply of silver from the conquered; but I have not been able to discover any analogy between the operation there described and the events which have occurred in our own country.

There are indeed several obvious modes in which a debased coinage may operate to the disadvantage of its holders, more especially in times of scarcity. *Internally*, bread being in the ordinary way purchased with coinage of small value, which is very rarely debased, when, from scarcity, it rises to a price which calls larger coinage into play, if this latter shall have been unduly debased it will not realise its nominal value in the purchase of food. It has been with silver coinage of various denominations that the trouble has nearly always risen. *Externally*, a more obvious sense in which debased coin (silver or gold) may operate in periods of scarcity, is that its purchasing power in all external dealings is lessened not only in the degree to which it has been debased, but even to a greater extent by the prejudice, or want of confidence its known debasement has inspired. Thus a British merchant seeking to buy grain abroad, where the coinage value will have to be measured in relation to some coin of the country wherein the purchase is made, or in relation to the standard value of the precious metals in such country, it is certain that the coin tendered will only have a purchasing power in exact relation to its intrinsic character. This latter view leads at once to the consideration of the modes by which a currency may be debased. These are four:—

1. By employing the smaller amount of pure metal in manufacturing coin having a nominal fixed value—as for instance making 20s. currency out of silver of the value 15s. only, or any sum less than the current denomination of the coin.

2. By mixing an undue proportion of alloy (originally spelled allay) with the pure metal in any given class of coin, by which the weight is maintained, but the value deteriorated.

These may be denominated the imperial mode of producing a debased coinage. They have each been adopted on many occasions in this country.

3. By means of clipping, filing, drilling, sweating, and otherwise lowering the value of coin originally produced of the standard value.

4. By counterfeiting, *i.e.*, by making coin of inferior metals so as to pass current for those of ordinary value, a process which has been largely applied to our coinage on many occasions. These last divisions have each to be spoken of historically.

First. Originally, as we all know, the sum which we now call a

pound actually represented a pound troy, or 12 ozs. of standard silver, which latter consisted of 11 ozs. 2 dwts. of pure silver, and 18 dwts. of alloy, so that 1*l.* paid in silver money would be one pound weight of standard silver. In the year 1087 this pound troy was divided into 20 shillings exactly; by 1347 it was made into 22½ shillings, *i.e.*, 1*l.* 2*s.* 6*d.* By the middle of the fourteenth century it was made into 2*s.*; by 1412 into 3*s.*; and ten years later, or by 1422, into 3*s.* 6*d.*; by 1505 into 4*s.*; a few years after into 4½*s.*; and by 1543 into 4*s.* In another century no less than 7*s.* were made out of the same weight of silver; and this was the highest point ever reached, *i.e.*, the greatest measure of debasement (in this form) to which the English coin has ever been reduced. From this extreme, a few years later, the pound troy came to be coined into 6*s.*, and during the seventeenth and eighteenth centuries into 6*s.*

Second. The proportion of alloy remained precisely the same from the Conquest for a period of five hundred years, *viz.*, down to 1532, *viz.*, 18 dwts. to the pound of silver—this alloy being of tin, and was serviceable in hardening the coin, and hence of making it more durable; but in 1543—reign of Henry VIII—the proportion was increased to 2 ozs., so that in a pound weight of standard silver there was 10 ozs. only of pure silver but a few years later the standard was lowered to half alloy, *i.e.*, 6 ozs. of pure silver, 6 ozs. alloy; and the worst had not yet come. During the greater part of the reign of Edward VI the proportion of pure silver was only one-third, *viz.*, 4 ozs. against 8 ozs. alloy. After going up again to one-half in 1549 it descended in 1551 to one-fourth, *i.e.*, 3 ozs. of pure silver to 9 ozs. of alloy. The ounce of standard silver thus became debased from 5*s.* 2*d.*, where it had remained until 1532, down to 1*s.* 10⅔*d.* in 1548, and to 1*s.* 4¾*d.* in 1551, and in like manner the ounce of pure silver became increased from 1*s.* 9⅔*d.* in 1087 to 24*s.* in 1551. But we have seen in the previous paragraph that while all this debasement was going on, the pound of standard silver was *all the time being coined into larger numbers of shillings*, until at length in 1551 the shilling only weighed less than one-third of its original weight, and this reduced quantity of metal was only of one-fourth the purity of the original English coin. Herein is seen a twofold, nay, about a tenfold reason why the purchasing power of the coin should be of small avail in periods of emergency!*

* I ought, as a matter of patriotism, to add that the standard of coin has been less degraded in England than in many, perhaps most, of the European nations. In *France*, the *livre*, or pound in tale contained in the reign of Charlemagne precisely a *pound weight* of pure silver; but, by successive degradations, it contained at the commencement of the French Revolution only one-sixth of an ounce, or one

Happily we are left in no doubt regarding the facts here indicated. The mint has stood in relationship to the Crown as a department acting under well defined contracts from time to time renewed. These contracts have always defined the "standard" of silver to be employed in the coinage. Sir Charles Whitworth, M.P., whose name frequently occurs through this paper, and who was one of the highest statistical and financial authorities living in the last century, in the preparation of his "Inquiry into Prices" (published in 1768, without his name appended, but with the authorship well known) took the trouble to make reference to these mint indentures, and to ascertain the standards therein prescribed. From these, as his base, he deduced the following :—

seventy-second part of a pound of silver. The *Spanish* maravedi, which in 1220 weighed 84 grains of gold, and was worth about 14 shillings of our present money, has now become degraded into a small copper coin of the value of about *one-sixth* of the English penny! But, as the Acts of Parliament say, in that part of the United Kingdom called *Scotland*, the pound weight of silver, which had previously to 1296 been coined into *one* pound, or 20 shillings, was in 1601 coined into thirty-six pounds, or 720 shillings.

The depreciation of the currency is not, however, the only means by which rulers have in past times defrauded their subjects. The appreciation has sometimes been quite as effective a weapon and has been used in modern times. The first instance of this kind which I find recorded occurred in Roman history. The Roman citizens being bound to pay into the Imperial treasury, not a certain weight of gold but a certain number of pieces of gold, or *aurei*, the Emperor Heliogabalus, whose vices have become proverbial, in order to increase his means of dissipation without appearing to add to the weight of the taxes, increased the quantity of metal contained in the *aureus*, thus obtaining by dexterity what he might never have obtained by open dealing. In this, however, he was probably only enlarging upon a hint obtained from Licinius, a freedman of Cæsar's, who in his government of the Gauls under Augustus, divided the year into fourteen months instead of twelve, because the Gauls paid a certain *monthly* tribute! See Dion Cassius, lib. 72.

Table Exhibiting the Standard Weight, Value and Comparative View of English Silver Money from William the Conqueror down to 1765.

1 Dates of the several Mint Indentures.	2 Standard of the Silver at each Period.		3 Number of Shillings, &c., the Pound, or 12 ozs. Troy of Standard Silver, has been Coined into at each Period.		4 Weight of Twenty Shillings in Tale of Standard Silver at each Period.		
	Fine Silver.	Alloy.					
	ozs. dwts.	ozs. dwts.	s.	d.	ozs.	dwts.	grs.
1066	11 2	— 18	21	4	11	4	—
'87	11 2	— 18	20	—	12	—	—
1300	11 2	— 18	20	3	11	17	1
'47	11 2	— 18	22	6	10	13	8
'54	11 2	— 18	25	—	9	12	—
'95							
1402							
'12	11 2	— 18	32	—	7	10	—
'22	11 2	— 18	30	—	8	—	—
'22	11 2	— 18	37	6	6	8	—
'26	11 2	— 18	30	—	8	—	—
'61	11 2	— 18	37	6	6	8	—
'64							
'82							
'83							
'94	11 2	— 18	40	—	6	—	—
1505							
'09	11 2	— 18	45	—	5	6	16
'32							
'43	10 —	2 —	48	—	5	—	—
'45	6 —	6 —	48	—	5	—	—
'46	4 —	8 —	48	—	5	—	—
'47							
'48							
'49	6 —	6 —	72	—	3	6	16
'51	3 —	9 —	72	—	3	6	16
'53	11 1	— 19	60	—	4	—	—
'53	11 —	1 —	60	—	4	—	—
'60	11 2	— 18	60	—	4	—	—
'83							
1601	11 2	— 18	62	—	3	17	10
'05							
'27							
'60							
'70							
'85	11 2	— 18	62	—	3	17	10
1764							

Note.—Mr. Tooke considers that from this date the intrinsic value of English coinage has substantially remained unchanged, "History of Prices," vol. iv (1857), p. 487. The table confirms this view; but some of the works referred to in Table XI, convey a different impression.

Table of the Standard Weight and Value of English Silver Money—Contd.

1	5	6	7	8	9
Dates of the several Mint Indentures.	Weight of Fine Silver contained in Twenty Shillings in Tale at each Period.	Value of the same Twenty Shillings in Tale in our Present Money.	Proportion of Money at each Period to our Present Money.	Value of the Ounce of Standard Silver, in Present Money.	Value of the Ounce of Fine Silver, at each Period.
	ozs. dwts. grs.	£ s. d.		s. d.	s. d.
1066	10 8 3	2 18 1½	2·9062	5 2	1 11⅛
'87	11 2 —	3 2 —	3·1000	5 2	1 9⅞
'1300	10 19 6	3 1 2⅜	3·0614	5 2	1 9⅞
'47	9 17 8	2 15 1⅜	2·7557	5 2	2 —⅜
'54	8 17 14½	2 9 7¼	2·4802	5 2	2 3
'95					
1402					
'12	6 18 18	1 18 9	1·9375	5 2	2 10⅝
'22	7 8 —	2 1 4	2·0666	5 2	2 8½
'22	5 18 10	1 13 —¾	1·6531	5 2	3 4½
'26	7 8 —	2 1 4	2·0666	5 2	2 8½
'61	5 18 10	1 13 —¾	1·6531	5 2	3 4½
'64					
'82					
'83					
'94	5 11 —	1 11 —	1·5500	5 2	3 7¼
1505					
'09					
'32	4 18 6	1 7 6⅝	1·3776	5 2	4 —⅝
'43	4 3 8	1 3 3¼	1·1634	4 7⅞	4 9⅝
'45	2 10 —	— 13 11⅝	0·6984	2 9½	8 —
'46	1 13 8	— 9 3¾	0·4656	1 10⅜	12 —
'47					
'48					
'49	1 13 8	— 9 3¾	0·4656	2 9½	12 —
'51	— 16 16	— 4 7⅞	1·2328	1 4¾	24 —
'53	3 13 16	1 — 6⅞	1·0286	5 1¾	5 5⅞
'53	3 13 8	1 — 5¾	1·0239	5 1½	5 5½
'60	3 14 —	1 — 8	1·0333	5 2	5 4⅞
'83					
1601					
'05	3 11 14¾	1 — —	1·0000	5 2	5 7
'27					
'60					
'70					
'85					
1764					

From this valuable table we learn not only the facts I have already recited, but many of others of the first importance in estimating the depreciation to which our silver coinage has been subjected.

It must be distinctly understood that the only values in this paper which have been adjusted in conformity with the silver values here indicated are those in column 3 of Table XIV. It has been essential in quoting Acts of Parliament and other public documents, to adhere to the exact prices they furnish; but when

such prices are brought into comparison over a long series of years, then they require to be adjusted in the light of the variations in the value of the currency which has occurred during the period under review.

Third. In considering the question of clipping of coin, which prevailed so extensively during the thirteenth, fourteenth, and fifteenth centuries, we must carry our minds back to the form of the coinage, more particularly of the silver coinage, during that period. It was produced from strips of metal cut from the sheets into which it had been moulded after leaving the melting-pot. These strips or thin bars were cut with shears into pieces of exact weights, according to the denomination of coin intended. These square pieces were formed into a round shape by a hammer, after which they were made white by boiling; lastly, they received an impression from a hammer, and were then put in circulation.

It is easy to understand how these hand-made coins might be cut down and hammered out so as to approximate to the original size, which was the usual guide in ordinary dealings, and it was only when they were brought together in the mass and placed in the scales that their real deficiencies became known.

Filing and drilling were usually applied to the larger silver coins, and occasionally to those of gold, and very considerable depreciation may be effected without altering the general appearance.

The sweating process is usually applied to *gold* coinage only. It consists in putting a number of new coins into a bag and moving them rapidly, the friction causing minute particles to come off, which are aggregated by consuming the bag in the melting-pot.

The producing of coins with raised milled edges—a most effective protection against clipping—is usually attributed to Cromwell, during the Protectorate, 1653-58, but it is certain that some were put in circulation by Henry VII; *see* Table XI, date 1503 (19 Henry VII, cap. 5).

Fourth. The counterfeiting of coins is simply a matter of mechanical ingenuity, and the rougher the original manufacture the more easily the process of imitation. The difficulty always lies in passing the counterfeit coin into circulation. But in early times, before bills of exchange came into practice in this country, and before banks were known, our dealings with foreign countries were necessarily through the medium of coin. Foreign merchants seeking to buy wool, woollen cloths, or other merchandise here, brought over the coin of their own or of some other country to present in payment. Our merchants going over to the continent to purchase grain, took our coinage with them for the purpose of making payment. Thus the coinage of all the trading nations

became common in each, and the facilities for counterfeiting were multiplied in like proportion.

Coinage generally.—In order that the full measure of coinage complications through which this country has passed may be comprehended in all its bearings, I have had recourse to the statute book, and for a period of fully five centuries there is here exhibited such a record of struggles and defeats as could be accurately portrayed by no mere method of verbal description. For the first three centuries of this period there was a *bonâ fide* struggle to keep up the purity of the coin; for the next two the struggle was to keep up the nominal value, while the actual value was being rapidly debased.

It is more than probable that the high standard our coin maintained in the early period caused it to be sought after largely on the continent of Europe, and hence its frequent scarcity at home. The countries of the continent sent us an inferior standard of coinage, which for a time did duty here, but for purposes of external dealings could never be made fully available by us.

In order to elucidate the effects of a depreciated currency upon our food supplies, I have quoted from authors of acknowledged authority. Frequently the legislation of the period confirms their surmises and conclusions; but occasionally the very opposite appears to be the case. I have not attempted to harmonise such discords.

The difficulties appeared to lessen gradually from the early part of the eighteenth century—reign of Queen Anne—but I have continued my Table XI up into the present century, as illustrating currency effects upon several of our later famine periods, and I have made very especial reference to the use of *tokens* as tending to elucidate the sufficiency, or otherwise, of the currency at different periods.

The latest instance of a scarcity of coin producing a famine is that of Ireland, and we quote the words of Mr. Delahunty (the member for Waterford), as given in the “Times,” 21st March, 1878, debate on Money Laws (Ireland) Bill. “In Ireland, in 1822 and 1823, the banks failed, and the result was that *famine stalked through the land, and provisions could be had for half the price they previously fetched.* (A laugh.) The people starved because the circulating medium did not exist, and there was no employment.”

TABLE XI.—*Currency Restrictions, Legislative and Otherwise, especially including Debasing the Coin, whereby either Direct or Indirect Influences bearing upon the Price and Supply of Provisions have been brought into Play.*

B.C.	
55 to	The Romans coined money at Camalodunum (Colchester). This was the first money in the British Isles.
A.D. 449	The Anglo-Saxons coined silver; and it has been supposed that they had a copper coinage also.
827 to	
1013	
'15	"The coin was observed to be greatly clipped, from whence every kind of provision became so dear that multitudes perished."—SIR CHARLES WHITWORTH, M.P.
'49	"All the great men of the realm, the bishops, earls, and barons, coined their own monies; this increased the price of provisions; and was attended with many impositions and losses to the nation in general; but more especially to the trading portion."—SIR CHARLES WHITWORTH.
'55	Henry II repaired the coin, and ordered that his money only should be current in the kingdom.
'80	The king again called in the debased coin.
1202	The current coin was again debased.
'16	Coin was made sterling at this date; previously rents were mostly paid in kind; and money was found only in the coffers of the barons.—STOW.
'27	"The pope having extorted great sums of money from the English clergy, it is probable as the coin of the kingdom became scarce, the price of provisions could not rise."—SIR CHARLES WHITWORTH.
'46	"The current coin being egregiously clipped, so that without any other reason assigned we find wheat and prices consequent of a famine."—SIR C. WHITWORTH.
'50	"About this time money was so shamefully clipped, that by an order it was enjoined to be taken only by weight; which order (it's said) produced a great obstruction to trade for some time."—JOHN SMITH'S "Memoirs of Wool," &c.
'55	"The extortions of the pope, and the sums obtained by the Earl of Cornwall, raised the interest of money to 50 <i>l.</i> per cent. It was computed they took of the kingdom 2,170,000 <i>l.</i> in real specie, for paper currency was then unknown: this occasioned a general decay of trade; which was aggravated by a famine."—SIR CHARLES WHITWORTH.
'72	Some 280 Jews were executed for clipping the current coin of the realm.
'91-92	The <i>statuta de moneta</i> (statutes concerning money) is attributed to this date, 20 Edward I, and contains the following:— <p>"Against the perils and damages which are of late come, and which hereafter may come of the money of England. It is thus ordained, that it be cried and defended on the king's behalf throughout the whole realm, in all the merchant towns, that no men upon grievous forfeiture be so hardy to dispend, receive, or send money of other coin than of the coin of the king of England, Ireland, and Scotland. . . .</p> <p>"And also that it be cried and commanded on the king's behalf, that if any find money coined of any other coin than that of the coin of the king of England, Ireland, or Scotland, or clipped money, that he break the same; and that none be so hardy to gainsay the same upon pain of grievous forfeiture; and he which findeth the same false, shall break the same, the broken money shall be given to him which oweth it, and the false money shall be pierced without restoring it; and the body of him in whose hands the false or clipped money appeareth to be found, be taken and holden until such time as he can find surety, if he be a suspicious man.</p> <p>"And because that many of the poor and rich people cannot know</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.		
1291-92		<p>the light and clipped money from the other, now it is ordained, that hereafter he which ought to receive or pay money, shall receive and pay the same by weight of v. s. of even weight by the tumbrel, delivered by the warden of the exchange marked with the king's mark as the measures are ; and it shall be lawful to any man to pierce the money which shall not pass the tumbrel ; and the money of other coin than of the coin of the king of England, Ireland, and Scotland, the weight shall be as well delivered and marked by the warden of the exchange, as the tumbrel.</p> <p>"The viewier and the warden of the money which shall come from beyond the sea, when he shall have any, he shall have regard unto the age thereof, and shall weigh the same. And if he find of the new money, that the pound weigheth not xx's, by the number of iiij pence, then he shall have regard by the tumbrel where the default shall be ; and if there be money which is much used, if in the whole pound of xx's, it want but vjd, then it shall be delivered to him who bought the same without gainsaying ; and if it want more, it shall be done of them as of the rest. And let the warden aforesaid take good heed that he take no gift nor allowance to spare any one, nor make any extortion, nor give any manner of delay, as he will save himself and his goods."</p> <p>The following clauses, although usually printed in this same statute, are believed really to belong to another, probably of later date (say Edward II) ; but it is convenient to take them next :—</p> <p>"These be the things which arise on this side of the sea and on the other, to the great damage of our lord the king and of his people, to the great corruption of his money of England.</p> <p>"First, they make there abroad, a money of silver, with a mitre ; 20s., of which money weighs only 16s. 4d. of the money of England.</p> <p>"Also they make two other sorts of money with lions, whereon there are heads on the one money, and not on the other, but which are as light as the money with the mitre.</p> <p>"Also they make as well on this side of the sea as on the other, a sort of false money, which is merely of copper, and is wightened, and when it is new it resembles the money of England.</p> <p>"There is also another sort of money which is made in Germany, under the name of Edward, king of England, which weighs as little as, or less than, the money with the mitre, and that cannot be distinguished, unless it be by weight.</p> <p>"The other deceit which they make in the money is, that there are some who bring plates of pewter, or of lead, in the form of a penny, then they put them between two leaves of silver, and afterwards insert them into coin or into copper, when another penny well forged hath been struck.</p> <p>"Others, as well on this side the sea as on the other, do clip the good and lawful money to the damage of the whole community. Those moneys which are made and clipped out of England are brought by passengers, and especially by merchants. And because they know that search is made for them at Dover, they put them into cloths and bales ; then they come not to Dover or Sandwich, but they come to London or into Essex, or into Suffolk, or into Norfolk, or to Hull, or into Lindsay, or to some other ports of England, where they expect to find no hindrance ; <i>the which things if they should be long permitted to be so would bring the money of England to nothing.</i>"</p>
'95	....	Edward I "caused the wooll and leather to be stayed in <i>England</i> , and there followed great dearth of corne and wine."—PENKETHMAN.
'99	....	<p>"Much base money was current. Trade was in great decay. The king ordered new monies to be coined, and half-pence of silver."—SIR CHARLES WHITWORTH.</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*A.D
1299

Accordingly this year there was enacted the 27 Edward III—
“A statute concerning false money”—which recites :

“Whereas our kingdom and the other lands of our sovereignty are filled with divers bad monies known by the names of pollards and crockards, and by other names, which are brought and left in the said kingdom and elsewhere within our jurisdiction by divers persons coming from abroad, and therein diversely dispersed, to the great damage of our people.” It is then enacted that henceforth such monies shall not be imported under forfeiture of life and goods ; and “Forasmuch as this ordnance cannot avail if it be not well maintained ; it is ordained that good and strict watch be kept in all places upon the open coast, at the ports and elsewhere, where there is any coming from abroad, by good and lawful sworn men, who shall arrest those who bring such or other bad monies, together with the monies and everything belonging to them.” These officers were known as “wardens of the ports.” It is further recited : “Whereas we have been informed that the good sterling is counterfeited in foreign parts with base and false metal, to the great damage of our realm aforesaid ;” persons bringing “stirlings” from abroad were to deliver them up to the wardens to be assayed, “and the said wardens shall also send their bodies with the money, safely and courteously.” If money good, to be given up and persons released ; if bad, money and bodies to be retained at “our pleasure.”

1311

In confirmation, part of the palace of Westminster being destroyed by fire, a parliament was held by Edward I, in the house of Henry Wallis, mayor of London, at Stebenheth, “when crockards, pollards, and rosaries coyned in foreign parts beyond seas, and uttered for sterlings, were cried down.”—*Stow's English Chronicles*.
By 5 Edward II, cap. 30, it is enacted, “Forasmuch as at all times when an exchange of money is made in the realm, the people are greatly aggrieved in many manners, we do ordain that when need be, and the king willeth to make an exchange, that he do it by the common council of his baronage, and that in parliament.”

'19

To this year, 12 Edward II, is attributed the following : “Edward, by the grace of God, King of England, Lord of Ireland, and Duke of Aquitaine, to the sheriff of Lincoln, greeting : Because that strange merchants, and also some merchants denizens of our realm, from day to day bring into the same our realm, from the parts beyond the sea, our money clipped, and other money of divers coins counterfeited and mingled with our money, trafficking and buying with the same money, to the great loss of us and all our people, and also the subversion of all our money. We hereupon willing to provide a remedy, unless peradventure by longer sufferance a greater danger might ensue, command you that in your full county, and in all your cities and merchant towns of the same county, you do cause strictly to be forbidden and openly proclaimed, that no strange merchant, nor any other from henceforth, bring into the realm any such money of ours rounded [clipped], or any other counterfeited of strange coins, or else use the same in buying or trafficking ; and if they do, at the first time wherein they shall be taken therewith, they shall lose such rounded money, or any other counterfeit ; and if they shall be again found in the like offence, they shall lose such money and other goods found with them ; and if the third time they commit the like offence, and be taken therewith, their bodies and also all their goods and chattels shall be forfeited unto us. But others who shall not be merchants, and shall have such rounded money, or other counterfeit money, shall presently pierce the same and send it to our exchange to be new coined under our coin ; or otherwise in whose hands such money shall be found, the same shall be unto us wholly forbidden. Provided moreover that all pennies of money clipped or

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1319	counterfeited, when by forfeiture of others the same shall come to our hands, shall be in like manner pierced and sent to our exchequer. Witness the king at York, the 2nd day of February. By the council."
'23-24	By the "Assise of Weights and Measures," attributed to this date, it was enacted— <p>"By consent of the whole realm the king's measure was made so that an English penny, which is called the sterling, round without clipping, <i>shall weigh 32 grains of wheat, dry in the midst of the ear.</i> 20 pence make an ounce and 12 ounces make a pound." [Note—"London to wit, 20 shillings of sterlings."] It was the silver penny obviously which is here referred to. "By the same statute it was enacted that 7 pounds made a gallon of wine; 8 gallons of wine make a bushel of London, which is the eighth part of a quarter." [Note—"And 12 pounds and a-half make the stone of London."]</p> <p>Here is an indication alike as to money and measures that the values relate to London; but as to money, it seems to have been intended that the statute should apply to the entire kingdom.</p>
'35	<p>The 9 Edward III, statute 2, cap. 1, enacted as follows:—</p> <p>"Edward, by the grace of God, King of England, &c., to the sheriffs of York, greeting: Because we have perceived that divers people beyond the sea do endeavour themselves to counterfeit our sterling money of England, and to send into England their weak money, in deceit of us, and damage and oppression of our people, if remedy be not provided; we willing to prevent and let all such deceits, damages, and oppressions, and to this that our good money be increased in our realm, and other countries within our power, to the profit of us and our subjects; by the assent of the prelates, earls, barons, and other great men of our realm, at our parliament holden at York, the morrow of the Ascension last passed, there assembled, have ordained and established these things ensuing in the manner underwritten:</p> <p>"I. First. It is provided that from henceforth no religious man [pilgrim], nor other shall carry any sterling out of the realm of England, nor silver plate, nor vessel of gold, nor of silver, upon pain of forfeiture of the money, plate, or vessel that he shall so carry without our especial license.</p> <p>"II. <i>Item</i>—That no false money or counterfeit sterling be brought into the realm, nor elsewhere within our power, upon forfeiture of such money.</p> <p>"III. <i>Item</i>—That no sterling halfpenny nor farthing be molten for to make vessel or any other thing by goldsmiths nor others, upon forfeiture of the money so molten. . . .</p> <p>"IV. <i>Item</i>—That all manner of blank money which hath been commonly current of late in our realm and obseisance, be utterly excluded, so that none such shall be current after a month next after the cry thereof made, upon pain of forfeiture of the same money. . . .</p> <p>"VI. <i>Item</i>—That the vizors and bailiffs of every port where merchants and ships be, shall take the oath of the merchants and masters of the ships going and coming again, that they shall do no fraud against this provision in any point."</p> <p>Searchers were to be appointed at the ports of the kingdom to guard against the carriage of money or plate from out the kingdom.</p> <p>In 1336 the complaint of a scarcity of money was so great that the king was allowed to export 20,000 sacks of wool to Flanders, the value of which was 918,000<i>l.</i>—SIR CHARLES WHITWORTH.</p>
'43	<p>In 17 Edward III, it was enacted as follows:—</p> <p>"<i>Item</i>—It is accorded to make money of good sterling in England of</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1343	the weight and allay of the ancient sterling, which shall be current in England between the great men and the commons of the land, and the which shall not be carried out of the realm of England in any manner, nor for any cause whatsoever; <i>and in case that the Flemmings will make good money of silver groats, or other, according in allay with good sterling, that such money shall be current in England between merchant and merchant and others who of their own accord will receive the same</i> ; so that no silver be carried out of the realm."
'44	By 13 Edward III, statute 2, cap. 6, it was enacted:— <i>"Item—That no man be compelled to take the new money of gold and silver which our lord the king hath ordained, to go in payment at a certain price, within the sum of 20s. And also that money of gold and silver be made in the city of York, and elsewhere, where the king will it ordain, in the manner as it is made in the Tower of London; and exchanges shall be ordained in the great towns, according as it best shall seem to our sovereign lord the king, for the profit of him, and ease of his people. And that it be ordained in a certainty, what thing shall be given in exchange for every piece of gold."</i>
	In conformity with the preceding statute, the king, by advice of his council, commanded florins of gold to be coined, to pass for 6s., half florins for 3s., and quarter florins for 1s. 6d. money of that time. "But Edward aiming at too much profit, had set too high a value upon these pieces, which prevented their currency. To remedy this, he coined that same year, <i>nobles</i> , half nobles, and farthing nobles—the noble to pass for 6s. 8d., and the gold of the first coinage to be brought to the mint, and sold for its real value. In the first coinage a pound of gold was rated at 15 <i>l.</i> of silver, in the second at only 13 <i>l.</i> 3 <i>s.</i> 4 <i>d.</i> The noble was so called either on account of its value and beauty—being the largest and finest then known—or on account of the honourable occasion on which it was struck, the great naval victory over the French, obtained by Edward in person in 1340; for on that coin Edward appears completely armed, in a ship, with a naked sword in his right hand. These nobles, half and quarter nobles, continued to be the chief gold coins to the end of the fourteenth century."—WADE'S <i>British History</i> .
'46	"Edward III made a material alteration in the state of the coin, by commanding 22 <i>s.</i> 6 <i>d.</i> to be coined out of the Tower pound of silver. By this regulation the weight of the silver penny, <i>which was still the largest real coin</i> , was reduced from 22½ to 20 troy grains, and the pound to 51 <i>s.</i> 8 <i>d.</i> of our money."—WADE'S <i>British History</i> .
'51	"The king made a still greater change this year by coining silver groats and half groats, the groats weighing 72 troy grains; and 60 of these groats made a nominal pound sterling, and containing therefore a restricted value as against earlier periods, being about as much silver as 46 <i>s.</i> 6 <i>d.</i> of our present money."—WADE'S <i>British History</i> .
'51-52	By the 25 Edward III, statute 5, cap. 2, in an enumeration of the offences which are to be adjudged treason, is this: "And if a man bring false money into this realm, counterfeit to the money of England, as the money called Lushburgh, or other like to the said money of England, knowing the money to be false, to merchandise or make payment in deceit of our said lord the king and of his people."
	By 25 Edward III, statute 5, cap. 13, it was enacted:—
	<i>"Item—It is accorded that the money of gold and silver which now runneth shall not be impaired in weight or allay; but as soon as a good way may be found, the same shall be put in the ancient statute as in sterling."</i>
'53	By the "Ordinance of the Staples," 27 Edward III, statute 2, cap. 15, it was enacted:—

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D. 1353 ...	<p>"Item—We have ordained, that all merchants, privy and strangers, may safely carry and bring within our said realm and lands, plate of silver and billets of gold, and all other manner of gold, and all money of gold and silver to our bullion and our exchanges, which we shall cause to be ordained at our said staples, or elsewhere, taking the money for our coin of gold and silver convenient to the value; and if any will take good money of gold and silver of other coin than ours in payment, he shall take the same without impeachment, so that none be thereunto compelled if he will not take it of his good-will.</p>
	<p>"Provided always, that no money have common course within our said realm and lands, but the money of gold and silver of our coin; and that none carry out of our said realm and lands the old sterling nor other money <i>but our new money of gold and silver</i>, except the merchants strangers, that bring to our said realm and lands any manner of money, and will not employ this money within our realm and lands; whom we will that they may recarry into their country all this money, or so much as shall remain thereof not employed without impeachment."</p> <p>Search was to be made at the ports "to the intent that no merchant shall carry more beyond the sea than he brought into the same realm and lands."</p>
'73 ...	<p>By 47 Edward III, cap. 2, it was enacted as follows:—</p> <p>"Item—For that the people of <i>Scotland</i> by their subtlety have drawn the good silver money out of England, and have made their coin of less value than the money of England is, and so it passeth in payment in the said realm of England, to the great damage and deceit of the king and of the great men and of all the commonalty. It is ordained and accorded that the <i>Scotch groat</i> shall be current of the value of <i>iiijd.</i> [<i>3d.</i>] and of less money according to the quantity; and if per case this Scottish money be impeired, the money so impeired shall be set at a less price, after the quantity of the impeiring." (See further 1390.)</p>
'81–82	<p>By 5 Richard II, cap. 2, it was enacted:—</p> <p>"Item—For the great mischief which the realm suffereth, it long hath done, for that gold and silver, as well in money, vessel, plate, and jewels, as otherwise by exchanges, made in divers manners, is carried out of this realm, so that in effect there is none thereof left, which thing if it should longer be suffered would shortly be the destruction of the same realm, which God prohibit; it is assented and accorded, and the king enjoineth all manner of people, merchants, clerks, and others, as well strangers as denizens, of what estate or condition they be, upon pain of as much as they may forfeit, that none of them upon the said pain, privily nor openly, send nor carry, nor cause to be sent or carried out of the said realm, any gold or silver in money, bullion, plate, or vessel, neither by exchanges to be made, nor in other manner.</p> <p>"Except for payment of king's forts beyond the sea, and by the king's license by exchanges in England to pay beyond sea."</p> <p>No person (with certain specified exceptions) was to depart out of the kingdom without the king's license, and then only at certain specified ports.</p>
'90 ...	<p>By 14 Richard II, cap. 12, a further abatement was made in the value of <i>Scotch</i> money as follows:—</p> <p>"Item—That the groat of the money of <i>Scotland</i> run in the value of only <i>2d.</i> English: and the half groat of <i>Scotland</i>, of a penny English; and the penny of <i>Scotland</i>, of a half-penny English; and the half-penny of <i>Scotland</i>, of a farthing English. And if the money of <i>Scotland</i> be impeaired, that the value thereof be abridged after the rate, and that commissions be made through the realm to</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1390	inquire of them that have brought or sent the money of England into Scotland, to make bullion or money of Scotland, in prejudice and damage of the king and his realm."
'93-94	The 17 Richard II, cap. 1, after reciting the 9 Edward III, statute 2, cap. 3, against melting of money, extended that statute to groats and half-groats, and then proceeded:— <p>"And moreover it is ordained and assented that no gold nor silver of <i>Scotland</i>, nor of other lands beyond the sea, shall run in any manner of payment within the realm of England, but shall be brought to the bullion, there to be molten into the coin of England, upon pain of forfeiture of the same, and of imprisonment, fine, and ransom of him which doth contrary; and that no man shall send any English money into Scotland, to change the same in money, or for money of Scotland, upon the pain next aforesaid."</p>
1400-01	The 2 Henry IV, cap. 5, after reciting the 5 Richard III, statute 2, cap. 1, touching the exporting of gold and silver, proceeds:— <p>"Our lord the king, for to prevent the subtilty of them that will do fraud, or deceit to him in this behalf, hath ordained and established that if from henceforth any searcher of the king may find gold or silver in coin, or in mass, in the keeping of any that is passing, or upon his passage, in any ship or vessel to go out of any port, haven, or creek of the realm, without the king's special license, all that gold and silver shall be forfeited to the king, saving his reasonable expenses, which he shall be obliged to confess, and discover presently after, that he is warned and charged to do so by the same searcher, or else all the said money so concealed shall be forfeit to the king. Provided always, <i>that the merchant strangers that do sell their merchandise within the realm of England; and the one half of the money of England received for the same merchandises, do employ upon other merchandises of the realm, may freely carry out from the same the other half of the said money by the king's license, according to the statute thereof made.</i>"</p> <p>This somewhat obscure passage means that foreign merchants selling say 200<i>l.</i> of goods, might carry out goods of the value of 100<i>l.</i>, and the other 100<i>l.</i> in coin, upon the king's license. It then proceeds:—</p> <p>"<i>Item</i>—for the great deceit that is in this money of gold and silver of <i>Flanders</i> and <i>Scotland</i>, that doth commonly run in payments, made in payments, made in divers parts of the realm, to the great damage of the king and his people; It is ordained and established, that <i>all the money of gold and silver of the coin of Flanders, and of all other lands and countries beyond the sea, and also of the land of Scotland</i>, shall be voided out of the realm of <i>England</i>, and put to coin to the bullion within the said realm, betwixt this and the feast of Christmas next ensuing, upon pain of forfeiture of the same; and that all the merchants and others of Calais, which do receive any such gold or silver of the coin of <i>Flanders</i> or of other lands and countries beyond the sea, or of the land of <i>Scotland</i>, shall post the same to bullion at Calais, without bringing it in coin within the realm of <i>England</i>."</p> <p>Search was to be made at Calais, as well as on this side of the sea.</p>
'02	By the 4 Henry IV, cap. 10, it was enacted:— <p>"<i>Item</i>—For the great <i>scarcity</i> that is at this present within this realm of England of half-pence and farthings of silver, it is ordained and established, that the third part of all the money of silver which shall be brought to the bullion, shall be made in half-pence and farthings; and that of this third part, the one-half be made in half-pence, and the other half in farthings; and the same to do and perform the coiner shall be sworn in special; and that no goldsmith nor other person, whosoever he may be, cause to be</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1402	molten any such half-pence or farthings, upon pain to pay to the king the quatreble of that which so shall be molten against the form of this statute."
'07	The base coin imported from Genoa was prohibited.
'09-10	By the 11 Henry IV, cap. 5, it was enacted as follows:— <i>"Item</i> —Because that gally half-pence do commonly run in this realm for payment, in derogation of the king's crown, and in great deceit of the common people, it is ordained and established that the said galley half-pence <i>shall never be current</i> in payment nor in other manner within the realm of England, upon pain of forfeiture thereof. And moreover that the gally half-pence in whose hands soever they be found within the realm, shall be forfeit to our sovereign lord the king, after the two months next ensuing the proclamation of this statute; and also the same our lord the king will, that all the statutes or ordinances made before this time by him, or by his noble progenitors, not repealed, as well of the money of Scotland, as of the money of other realms and parts beyond the sea, be holden and kept, and put in due execution."
'11	The statute of 1409-10, as to gally half-pence, confirmed by 13 Henry IV, cap. 6. New money was coined.
'15	By 3 Henry VI [cap. 1] it was enacted:— <i>"That</i> gally half-pence, and the money called suskin and dotkin, and all manner of Scottish money of silver, <i>shall be utterly put out and not be current hereafter for any payment in the realm of England</i> . Joined to the same, that proclamation be made through all the counties of England within franchises and without [within cities and boroughs], and elsewhere, that all that have gally half-pence, suskins and dotkins, shall bring them to the King's Exchanges betwixt this and the feast of Easter next ensuing, there to be broken, and that that is found good silver, there to be stricken and coined in English half-pence."* And all they that offended against this statute were to be deemed felons; with further provisions for discovery, &c.
'15-16	The 4 Henry V, cap. 6, is as follows:— <i>"Item</i> —Because that before this time great doubt and ambiguity hath been, whether that clipping, washing, and filing of the money of the land, ought to be judged treason, or not. Forasmuch as no mention thereof is made in the declaration of the articles of treason

* *King's Exchanges*.—The origin of these King's Exchanges has quite a little history, and dates back to Edward III. It was at this period no easy matter sometimes to exchange gold and silver coins for each other; and therefore Edward, and afterwards several of his successors, took the office of exchangers into their own hands, as well to prevent extortion as for their own advantage. They performed it by appointing certain persons, furnished with a competent quantity of coin, in London and other towns; these to be the only exchangers of money, at fixed rates. These royal exchangers had also the exclusive privilege of giving the current coins of the kingdom in exchange for foreign coin, to accommodate merchant strangers; as also of purchasing light money for the use of the mint. We have seen that several laws were in force against exporting English coin. The King's Exchangers at the several ports furnished merchants and others who were going abroad with the coin of the countries to which they were going, in exchange for English money, according to a table which hung up in their office for public inspection. By these various operations they made considerable profits, of which the king had a share. The house in which the Royal Exchanger kept his office was called "The Exchange," from whence the origin of Exchange or Royal Exchange, a place for merchants and strangers to meet to transact business.—*Vide WADE'S British History.*

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1415-16	made in the parliament holden in the 25 Edward III [statute 5, cap. 2], the same our lord the king, willing to decide such doubt and to put the same to certainty, hath declared in this present parliament that such clipping, washing, and filing shall be adjudged for treason, and they which do so clip, wash, and file the money of the land, shall be judged treason to the king and the realm, and shall incur the pain of treason."
'16	The circulation of base coin again prohibited, and a new coinage struck.—WADE.
'20	"The coinage of Henry V (1416), became not sterling; and there was a great scarcity of coin."—WADE.
'21	By the 9 Henry V, statute 2, the statutes concerning money were confirmed. A signorage upon coinage of money was imposed, viz., for gold, 5s. "for the pound of the Tower," and upon silver 1s. 3d. "for the pound of the Tower;" while those who would not subject their money to be coined into English were to be charged after the rate of 1d. for the noble, $\frac{1}{2}$ d. per half-noble, $\frac{1}{4}$ d. per quarter noble, "with the signorable and coinage as afore is said." It was further enacted:— "Item—That the king's mint be coined and made at Calais, in the manner as it hath been made and governed at the Tower of London. "VI. Item—That all the money of gold and silver that shall be made at the Tower of London and at Calais, or elsewhere in the realm of England, by authority royal, shall be made of as good weight as it is now made at the Tower. "Item—That the king do to be ordained good and just weight of the noble, half-noble, and farthing of gold, with the rates necessary to the same, for every city, borough, and market town, of the realm, to be delivered by the chancellor of England to them that will have them, to the intent that be not deceived by false counterfeits, and them that use false weight in deceit of the people." '23 By 2 Henry VII, cap. 9, it was enacted:— "Item—It is ordained, that proclamation be made through all the counties of England within franchises and without, and within cities, towns, boroughs, and elsewhere, that all the money called <i>blanks</i> shall be wholly out and voided out of the realm before the feast of St. John Baptist next coming; and moreover, that no man after the said feast pay or receive for payment in any manner within the said realm, the said money called blanks, upon the pain contained and ordained by a statute made 3 Henry V, and other to our lord the king's agent all that pay or receive for payment the money called gally halfpence, suskins, and dotkins within the realm." By 2 Henry VI, c. 16, it is recited and enacted:— "Item—Forasmuch as great scarcity of white money is within the realm, because that silver is bought and sold not coined at the price of xxxijs. the pound of troy, whereas the same pound is no more of value at the coin [mint] than xxxijs. abated for the coinage twelve-pence; It is ordained and established for the increase of the said white money, that no man, of what estate or condition he be, within the realm, shall buy or sell no silver in plate, broken nor in masse being as good of allay as the sterling, above 30s. in the pound of troy, over the fashion upon the pain of forfeiture of double the value of as much as he buyeth or selleth contrary to the ordinance." The words "over the fashion" which occur in this Act may be read "beyond he cost of workmanship":—

"Here's the note how much your chain weighs to the utmost carat,
The fineness of the gold and charge for fashion."—SHAKESPEARE.

This Act was repealed in 1623-24 by 21 James I, cap. 28, sec. 11.

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.		
1463	....	<p>An Act of the parliament of <i>Ireland</i>, 5 Edward IV, cap. 3—"An Act against clipped money"—is as follows:—</p> <p>"Also at the request of the commons, that inasmuch as the groat, the half-groat, and the penny, and other coins are lost and destroyed by divers and many clippings; It is ordained and established, and enacted by the authority of the said parliament, that money clipped shall not be taken in and by no manner of payment after the feast of the Purification of our Lady next ensuing, but that it be after the said feast utterly void, dampned, and determined no coyne of the king; and that it shall be lawful to every man to refuse the same, and that thereupon a proclamation shall be made in the said parliament, and upon the same proclamation, writs shall be directed to the sheriffs, mayors, bayliffs, sovereigns, portrisses, and all other officers and ministers within the said land of <i>Ireland</i>, to make proclamation upon the present Act. And thereupon proclamation was made in the said parliament according to the said Act or ordinance."</p>
'64	....	Edward IV called in the base money.—WADE.
'77-78		<p>By the 17 Edward 4, cap. 1, the Acts of 1335 and 1400-01 are recited, and it was then further recited:—</p> <p>"And now so it is that of late, and at these days counterfeit and false money of such countries, in poys [weight] figures and alay as groats and pence made in <i>Ireland</i> in part like to the groats and half-groats, four pens and two pens of this realm, in such a great multitude be daily brought into this realm, out of <i>Ireland</i> and other places, and put in payment in this realm, which if it should long endure, it should not only destroy the good money of this realm, but also cause the good money of silver of this realm made within the same, to be translated and turned into the said false and counterfeit money made in <i>Ireland</i> and other places, and also should cause a great part of the plate of silver to be carried out of this realm, and to be coined into the said false and counterfeit money, wherefore. . . . it is ordained that after the feast of Easter next coming, none of the same moneys of <i>Ireland</i> shall run in payment within this realm, Wales, Calais, or the marches of the same; nor that no person after the said feast put any of the same moneys, nor the same receive in any payment within this realm and upon pain of forfeiture of the same money. . . ."</p>
'88-89		<p>By 4 Henry 7, cap. 18, "Forgynge and countrefeyting of gold and silver of other londes supposed to renne in this realme is made treason."</p> <p>"Item—For as moche as by the kyngis sufferance dyverse coigne of golde and silver, whiche be not of the kyngis proper coigne of Englande, be currante in payment within this reame, dyvers and many evyll disposed persones, perceyving that the forgyng and counterfetyng of suche coignes is neither folonye nor treason, presume and take upon theym for their avails and prefyte to counterfyt and forge such coynes; to the grete hurte and prejudice aswell of the kyng our sovereyne lorde as to the hurte of all the kyngis subgettes; It is therefore ordeyned and established by auctorite of the said parliament, that the countrefeytyng and forgyng of every such coyne be adjudged treison, as it is of the countrefyting of the proper coynage of the kyng of this realme."</p>
		<p>The 4 Henry VII, cap. 23, revived the 27 Edward IV, cap. 1, prohibiting the exportation of money, plate and jewels; and it was enacted that no one should deliver by way of exchange to strangers, any gold coin or plate, bullion, &c., upon pain of forfeiture of the double the value thereof.</p>
'92	....	<p>Columbus discovered America: "The quantities of gold and silver this continent furnished within a short time after, greatly influenced the landed and trading interests of Europe."—SIR CHARLES WHITWORTH.</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1492	Again the same writer says, under date 1508, "Before the discovery of America the price of labour and provisions were but low but this sudden plenty of money enhanced the price of labour and provisions; the value of estates increased, and the landowner was in the end most advantaged; such were with us the first effects of Peruvian riches."
1503	<p>The 19 Henry VII, cap. 5, recites as follows:—</p> <p>"The king our sovereign lord, seeing evidently that his coin, and especially of silver, is sore impaired, as well by clipping thereof, as counterfeiting of the same, and by bringing into this his realm the coin of <i>Ireland</i>, by occasion whereby great rumour and variance daily increaseth among his subjects for outing and refusing of the same."</p> <p>"It is then enacted that all manner of <i>gold</i> of the coins of a sovereign, half-sovereign, royal, half-royal, and the fourth part of a royal, the angel, the half-angel, and every of them being gold, whole and weight, should go and be current in payment through all this his realm for the sum that they were coined for; and also that as well all manner of groats of <i>English</i> coin, and of the coins of other lands now current in this realm for groats, or for <i>ivd.</i> being <i>silver</i>, and not clipped, minished, or otherwise impaired, except reasonable wearing (albeit they be cracked), as all manner of half groats, or for <i>ijd.</i> not clipped, minished, or otherwise impaired, being <i>silver</i> (howbeit they be cracked) shall in likewise go and be current through all the same realm for the sum as they were coined for. And over that, that all manner of pence being silver, and having the print of the king's coin, shall have course and be current for payment, as well to him in all his receipts, as to all his receivers, and to all other lords spiritual and temporal and their receivers, and to all other within this his realm, without any manner refusal or contradiction except only pence bearing spurs, or the mullet, to have course for half-pence and not alone."</p> <p>Any person refusing to take such coins in payment for the values aforesaid, to be liable to punishment at the decision of a justice; then</p> <p>"That all manner of groats and half groats . . . as well <i>English</i> coin as coin of other lands, clipped, minished, or otherwise impaired, except reasonable wearing, shall not go or be in any wise current for payment within this realm, but utterly to be refused and forsaken in payment from henceforth. And that notwithstanding it shall be lawful to any person having any such groats or pence of <i>ijd.</i> clipped or diminished, to bring the same to the king's mint, there to be changed after the custom of the same mint, or convert the same into plate, bullion, or otherwise sell or employ it to his use or profit or advantage within this realm, any other Act or Acts to the contrary in any wise notwithstanding.</p> <p>"And in eschewing and avoiding of such clipping in time to come, the king . . . hath caused to be made new coins of groats and pence of <i>ijd.</i>, and that every piece of the same coin shall have a pence about the utter part thereof; and also all manner of gold hereafter to be coined within this his realm shall have the whole scripture about every piece of the same gold, without lacking of any part thereof, to the intent that his subjects hereafter may have perfect knowledge by that circle and scripture when the same coins be clipped or impaired."</p> <p>No one hereafter was to carry into <i>Ireland</i> more than <i>6s. 8d.</i> of bullion, plate, or coin, or to bring in more than <i>3s. 4d.</i> of Irish coin.</p>
'09	The 1 Henry VIII, cap. 13, inhibited the exportation of money, plate, or jewels, until next parliament.
'11	The 3 Henry VIII, cap. 1, also extended the inhibition, under penalty of double the value, until next parliament.

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1523 ...	By 14 and 15 Henry VIII, cap. 12—"An Act concerning coynynge of money"—the proportion of coins to be struck from 100 <i>l.</i> worth of gold or silver respectively was defined. The tenth part of any money coined for any person was to be in halfpence and farthings (to supersede the coins of these respective denominations then in currency, which were of the same size [<i>i.e.</i> equal] or thereabouts, causing deceit). This Act not to affect the mints of York, Durham and Canterbury.
'42-43	By 34 and 35 Henry VIII, cap. 27, it was enacted (sec. 25), that the lords of the exchequer and collectors might for the "space of oone hole yere nexte folowing take and not refuse in any payment, any ducates, crownes, crusadores, or any other golde coyned in the parties beyond the sea, bearing their true weight according to suche value as was limited by the laste proclamation thereof, made the xxvijth daie of Marche in the xxxth yere of the reigne of our saide soveraigne lorde the king."
'44 ...	Stevens in his "History of Taxes," (second edition, 1733, p. 209), openly accuses Henry VIII of coining base money, "against the honor of a prince."
'45 ...	By 37 Henry VIII, cap. 25, the like coins as specified in the Act of 1542-43, might be received in payment of subsidies.
'47 ...	Henry VIII had during the latter years of his reign suffered his coin continually to be debased—so that his shillings at this date (1 Edward VI) passed for 9 <i>d.</i> and afterwards for 6 <i>d.</i> only.—WHITWORTH.
'51 ...	By 5 and 6 Edward VI, cap. 12—"An Acte towchinge the exchanges of golde and sylver"—a penalty was inflicted for giving more for gold or silver coin than the value of its currency as provided by proclamation for the time being. [<i>Note.</i> —The object of this measure was clearly to prevent the sale of coin simply as bullion for purposes of transport and exchange.]
'52 ...	At this date the coin of the realm was three-fourths alloy.—WHITWORTH.
'52-53	By 7 Edward VI, cap. 6—"An Acte reviving a statute made in the xvijth yere of King Edward the Fourthe, touching the carrieng of golde and sylver out of the realme"—The Act of 1477-88, which had been continued by the Act of 1488-89 for twenty years, was revived, it being recited that "Sithin the whiche xx years sooe expired, the golde and sylver of the coygne of this realm hathe and daily ys and been carried and conveighed into France, Flanders, Normandy, Brytayne, Irelande, and other parties beyonde the sea, aswell by merchant strangiers, as by denizens, to the great impoverishing of this realme, and greater ys lyke to bee oneles remedye therfr spedelye be provided." The revived provisions to continue for twenty years from this date.
'53 ...	By 1 Mary, statute 2, cap. 6, the counterfeiting foreign coin current in the realm was declared high treason. Queen Mary restored the coin to very nearly its proper standard.—WHITWORTH.
'54 ...	By 1 and 2 Philip and Mary, cap. 11, the importation of counterfeit foreign coins current in this realm, with a view to the uttering the same here, was declared high treason.
'60 ...	The base coin called in and genuine coin issued.
'62 ...	By 5 Elizabeth, cap. 9—"An Act against the clipping, washing, rounding, and filing of coins," it is recited:— "Whereas the offences of clipping, rounding, washing, and filing of monies or coins of this realm, was declared by an Act of parliament, in the time of King Henry V, to be treason to the king and the realm; and according to the said Act the same offences were and did continue treason until the 1st May, at which time the pains and penalties due

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1562	for the said offences were abrogated and taken away by the general Act of repeal then made; by reason whereof divers false and evil disposed persons, perceiving themselves to be loose and free from the severity and danger of the said law and penalty, have been of late the more hardy and bold to attempt and practice for wicked lucre and gain's sake, to diminish, impair, and falsify the monies and coins current within this realm, and the dominions of the same, by such clipping, washing, rounding, and filing thereof, not only to the great dishonour of the queen's majesty our sovereign lady that now is, <i>by whose great goodness the new moneys or coins of the same are now reduced to as much fineness as ever hath been in any time of her noble progenitors</i> , but also to the great loss and damage of the good subjects of this realm, and more is likely to be hereafter if the same be not speedily met withal."
'72	The said offences were therefore again to be adjudged treason. By 14 Elizabeth, cap. 3—"An Act againste the forging and counter-fayingt of forraigne coygne, being curraunte within this realm"—the punishment for such offences was made imprisonment, with forfeiture of lands and goods.
75-76	By 18 Elizabeth, cap. 1—"An Act against the deminishing and empayring of the queenes maties coin and other coyne's lawfullye current within this realm"—it is recited:— "Whereas the offences of clipping, rounding, washing, and filing, for wicked lucre or gainsake, of any the proper monies or coins of this realm or the dominions thereof, or of the monies or coins of any other realm allowed by proclamation, and suffered to be current within this realm or the dominions thereof . . . are taken and deemed and adjudged to be treason, and the offenders therein, and their counsellors, consentors, and aiders likewise . . . are to suffer the pains of death. . . . Sithence the making of which good law and statute divers false and evil disposed persons, knowing that the said law being, as it is, penal, ought to be taken and expounded strictly according to the words thereof, and the like offences, not by any equity, to receive the like punishment or pains have . . . most wickedly devised and practised . . . undue ways and means to falsify, impair, diminish, and lighten, as well the proper monies and coins of this realm . . . as also the moneys of other realms allowed and suffered to be current within this realm."
	All of which was now to be deemed treason, punishable with death and forfeiture of lands, &c.
1615	The Earl of Stirling was constituted by James VI of Scotland (and continued in a like position by Charles I) a sort of deputy-sovereign of that kingdom; he assumed the office of master of the mint, "and obtained the royal authority to add to his private fortune by debasing the coin."— <i>Leaves from my Autobiography</i> , Rev. CHARLES ROGERS, 1876, p. 363.
'23-24	The Act of 1423 (2 Henry VI, cap. 16) was repealed by 21 James I, cap. 28, section 11.
'32	About 700,000 <i>l.</i> per annum was coined at the English mint.
'42-51	During the whole period of the civil war coin suffered much.—WHITWORTH.
'51	The Commonwealth's <i>sixpences</i> were the first milled coin in England.
'53	Private persons had liberty to coin their own <i>pennies</i> .
'58	Cromwell coined the first English milled <i>crown-piece</i> .
'61	This year there was published a book which engaged some attention, and has continued to attract attention ever since, viz., "England's Treasure by Forraign Trade: or the Ballance of our Forraign Trade is the Rule of our Treasure." By Thomas Mun, of London, merchant. In this little book is contained (I here quote from the third edition, 1669) chapters bearing the following titles:—IV. The

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1661	Exportation of our Moneys in Trade of Merchandise is a means to increase our treasure. VI. The Spanish Treasure cannot be kept from other Kingdoms by any prohibition made in Spain. VII. The Enhancing or Debasing our Monies cannot enrich the Kingdom with Treasure, nor hinder the Exportation thereof. VIII. A Tolleration of Foreign Coins to pass current here at higher rates than their value with our Standard, will not increase our Treasure. XI. It will not increase our Treasure to enjoin the Merchant that exporteth Fish, Corn, or Munition, to return all or parts of the valuable in money. It would have been well if our statesmen and legislators had paid regard to these truths when they were so proclaimed.
'62	<p>"The current coin of the realm had for years been so clipped as to lose half its value; <i>one reason why provisions sold at greater rates.</i>"—WHITWORTH. Milled money now began to be generally coined.</p> <p>By 14 Car. II, cap. 31—"An Act to prevent the inconvenience arising by melting the silver coyn of this realm"—it is recited that the Acts made in this behalf (9 Edward III, statute 2, cap. 3; and 17 Richard II, cap. 1) had been evaded; and it is now enacted that the penalty for melting the current coin of the realm was disfranchisement and imprisonment.</p>
'66	By 18 and 19 Car. II, cap. 5, it is recited as being obvious "that the plenty of current coynes of gold and silver of this kingdome is of great advantage to trade and commerce," and it is then enacted that for every pound troy of gold or silver brought there was to be delivered a pound troy of current coin; and more or less as the bullion exceeded or was less than the fineness of the standard. The cost of the coinage was to be defrayed by a new impost on certain liquors, viz., wine, vinegar, cyder, and beer imported—10s. per tun. Proviso for Lady Villiers (under letters patent) to be paid 2d. by toll of every pound weight troy of silver moneys coined for twenty-one years, but not to exceed 600 <i>l.</i> in any one year. (<i>See</i> 1672.)
'72	<p>By 25 Charles II, cap. 8—"An Act for continuing a former Act coning coynage"—it is recited :—</p> <p>"Forasmuch as great advantage hath accrewed to this kingdome by one Act of this present parliament . . . [1666] . . . for that very great quantities of gold and silver have been brought into this realme, and converted into the current coynes thereof by reason of the encouragement given thereto by the said Act."</p> <p>The recited Act, which was to continue till 20th December, 1671, was by the present Act continued for a further seven years.</p>
'72	The king coined copper half-pence and farthings.—WHITWORTH. (<i>See</i> note, 1697, Tokens.)
'85	By 1 James II, cap. 7, the Acts of 1666 and 1672 were continued for seven years further.
'88	<p>By 1 William and Mary, cap. 30—"An Act to repeal the statute made in the fifth year of King Henry IV, against the multiplying gold and silver," which recited that it was "amongst other things" [in the said 5 Henry IV, cap. 4] "enacted in these words or to this effect namely, that none from henceforth should use to multiply gold or silver or use the craft of multiplication; and if any the same do, they shall incur pain of felony."</p> <p>"And whereas since the making of the said statute, diverse persons have by their study, industry, and learning, arrived at great skill and perfection in the art of melting and refining of metalls, and otherwise improving them and their ores (which very much abound within this realm), and extracting gold and silver out of the same, but dare not exercise their said skill within this realm, for fear of falling under the penalty of the said statute, but exercise the said art in foreign parts, to the great loss and detriment of this realm."</p> <p>The said recited Act was now repealed, and it was enacted that</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D. 1688	henceforth all the gold and silver which should be extracted by the aforesaid art should be employed for no other use than the increase of money, the full value to be paid therefor at the mint, and the same was to be used nowhere but in His Majesty's kingdoms and dominions.
'91	There was published Sir Dudley North's "Discourse upon Trade, principally directed to the Cases of the Interest, Coinage, Clipping, and Increase of Money."
'94	By 6 and 7 William and Mary, cap. 17—"An Act to prevent counterfeiting and clipping the coin of this kingdom"—it is recited:—
	"Whereas it is manifest that of late years the current coin of this kingdom hath been greatly diminished by clipping, rounding, filing and melting the same, and likewise many false and counterfeit coins have been clipped for the better disguising thereof. And forasmuch as it is apparent that these practices of diminishing the current coin is very much occasioned by those who drive a trade of changing broad money for clipped money, and by other arts and devices.
	"It was therefore enacted that from and after 1st May, 1695, if any person or persons whatever, shall at any one time or payment, exchange, sell, borrow or buy, receive or pay any broad silver money, or silver money unclipt of the coin of the kingdom, for more in tale, benefit, profit, or advantage, than the same was coined for, and ought by law to go for, be lent, sold for, borrowed or bought, received or paid, shall forfeit the sum of 10 <i>l.</i> for every 20 <i>s.</i> that shall be so exchanged," &c.
	It was given in evidence before a committee of the House of Commons this year, that <i>five pounds</i> current silver specie was scarce worth 40 <i>s.</i> sterling. Besides an infinite deal of iron, brass and copper, washed over or plated, passed for money.
	There was published, "A Sermon against Clipping [the coin], preached before the right honourable the lord mayor and court of aldermen, at Guildhall chappel, on 16th December, 1694. By W. Fleetwood, chaplain in ordinary to their majesties [afterwards bishop of Ely]. London: printed by Tho. Hodgkin, and are to be sold by John Whitlock, near Stationers' Hall. 1694." Dr. Fleetwood was the author of <i>Chronicon Preciosum</i> .
'95	The silver coin was now so much debased and clipped that one guinea was equal to 30 <i>s.</i> current coin.
	The nation generally was alarmed at the circulation of "artificial wealth," such as bank notes, exchequer tallies, and government security. <i>Bank notes were at 20 per cent. discount.</i> —WHITWORTH.
	The condition of the currency had again become serious.
	1. By 7 and 8 William III, cap. 1—"An Act for remedying the ill state of the coin of the kingdom"—it is recited:—
	"Whereas the silver coins of this realm (as to a great part thereof), doe appear to be exceedingly diminished by such persons who (notwithstanding several good laws formerly provided, and many examples of justice thereupon), have practised the wicked and pernicious crime of clipping, until at length the course of the monies within this kingdom, is become difficult and very much perplexed, to the unspeakable wrong and prejudice of His Majesty, and his good subjects in their affairs as well publick as particular, and no sufficient remedy can be applied to the manifold evils arising from the clipping of the moneys without recoinng the clipt pieces.
	"Now to the end a regular and effectual method may be observed and put in execution in and for the recoinng of the said clipt moneys, whether the same be sterling silver, or bee silver of a courser alloy than the standard. And to the end the loss upon the said money soe to bee recoinng (to wit), the quantity of silver that is clipt away or deficient in the said moneys may be better known and

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.

1695

adjusted in order to the making satisfaction for the same by a public charge or contribution."

On or before 1st February, 1695, returns of clipped money in the Treasury were to be entered in a book; and up to 4th May, 1696, clipped sterling money was to be received at same rate as if unclipped, in order of being made into new coin. Sixpences not being clipped within the innermost ring, to be kept in circulation.

2. Same session. By 7 and 8 William III, cap. 13—"An Act for taking off the obligation and encouragement for coining guineas for a certain time therein mentioned," wherein the Acts of 1666, 1672, and 1685 are recited, under which coin, plate, or bullion taken to the mint might be coined into current coin of the realm without any charge or abatement for waste:—

"And whereas great quantities of gold have lately been imported from foreign parts, which being coined here as aforesaid into guineas, have been (on occasion on the present ill state of the silver coins) taken and accepted by the subjects of this realm, at very high and unusual rates and prices, tending to the great damage and loss of the public. The continuance of which practice (unless speedily prevented), will run the nations vastly in debt to foreigners, for the repayment, whereof the silver money of this kingdom, must inevitably be exhausted on terms of great disadvantage."

Therefore "to prevent the growth of so great an evil," the mint until 1st July following, was not obliged to receive or coin gold.

The wine duties were to be applied to the coinage of silver. There was a proviso for coinage of gold brought to the mint by the royal African company. The importation of guineas or half-guineas from beyond the sea, "which may prove very prejudicial to this kingdom in the present juncture," was prohibited on pain of forfeiture.

3. Same session. By 7 and 8 William III, cap. 19—"An Act to encourage the bringing plate into the mint to be coined, and for the further remedying the ill state of the coin of the kingdom"—it is recited:—

"Whereas severall persons haveing wrought or manufactured plate or silver in vessell are or may bee willing and desirous, *having a suitable encouragement given them*, to bring such plate or vessels into His Majesty's mint or mints to bee coyned into the current coines of this realme, which will tend to the publick benefit; it was therefore enacted that persons bringing plate, &c., to the mint to be coined, might have the same assayed, &c., without any charge, and for every pound troy of sterling or standard silver, there should be delivered out a pound troy of lawful moneys, *together with a reward after the rate of sixpence per ounce*, upon the quantity brought in.

After 4th May, 1696, no tavern keeper was to expose any silver article (except spoones), for public use, in his use, on pain of forfeiture. All persons having presses for coinage, taking the same to the mint would be paid for the same; but after the 3rd May, if found in the possession of any person they would be forfeited, with penalty of 500*l*. There were heavy penalties for shipping bullion without certificate that the same was of foreign ownership.

4. Same session. In William III, cap. 30, is contained a clause which sets forth the relations between the corporation of moneyers and the mint, regarding the coinage of small silver moneys.

5. By another Act of the same session, 7 and 8 William III, cap. 31, precautions are taken (section 84) regarding paying the 6*d*. per ounce reward upon silver plate brought to the mint to be coined; and a penalty was imposed for unduly tendering plate for coinage.

It is stated that the cost of reforming the coinage at this date was 1,200,000*l*.

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1695	<p>"A great want of money in specie, but this was remedied by issue of new coin."—WHITWORTH.</p> <p>It is reported that during this reign a commission, consisting of Lord Somers, Sir Isaac Newton and John Locke, was appointed to reform the coinage, from whence probably much of the legislation of this year proceeded.</p>
'95	<p>There was published "Lownde's Essay for the Amendment of the Silver Coin." 8vo.</p>
'96	<p>There was published "A Discourse concerning coining the new Money lighter, in answer to Mr. Lock's considerations about raising the value of money." By Nicholas Barton, Esq., London. Printed for Richard Chiswell, at the Rose and Crown, in St. Paul's Churchyard, MDCXCVI; also, "Regulating the Silver Coin made Easy and Practicable." 8vo.</p>
'96-97	<p>By 8 and 9 William III, cap. 1—"An Act for importing and coining guineas and half-guineas," which after reciting the Act of last session (cap. 13), further recites:—"But the said price of guineas being now reduced to, or neare the standard, and sundry persons being desirous to coine gold, and also to import great quantities of guineas and half-guineas, which may be very beneficial to the trade and commerce of this kingdom;" these coins were permitted to be freely imported.</p> <p>2. By another Act of this session, 8 and 9 William III, cap. 2—"An Act for the further remedying the ill state of the coin of the kingdom"—it is recited as follows:—</p> <p>"Whereas great mischief and inconveniences have fallen upon this kingdom by the frequent counterfeiting, clipping, and other unlawful diminishing of the current coine of this kingdom, for the remedying whereof for the future it is thought necessary that all the hammered silver coin of this kingdom should be recoined by the mill and presse, which will be less subject to those pernicious and destructive methods of clipping and counterfeiting; and that in the meantime, to put a stopp to the further clipping such hammered money, the same should not be current in payment, otherwise than is hereafter mentioned.</p> <p>"For the encouragement therefore of all persons to bring in their hammered silver money into His Majesty's minte to be recoined, be it enacted," &c. That all such hammered silver money clipped or unclipped, as should be brought by any person, at any time after the 4th November, 1696, and before the 1st July, 1697, should be received at 5s. 4d. per ounce; hammered coin to be taken for taxes on loans at 5s. 8d. an ounce.</p> <p>3. After 1st December, 1696, no hammered silver coin to be current, except by weight; broad hammered money to be received till 18th November, by tale for taxes, &c. All the hammered money to be melted down and coined by the mill.</p> <p>4. By a later Act of same session, 8 and 9 William III, cap. 6, it is enacted (section 106), that tender of hammered silver at rate of 5s. 2d. an ounce, after 1st February, 1696.</p> <p>By another Act of the same session, 8 and 9 William III, cap. 7—"An Act for granting to His Majesty several duties upon paper, vellum, and parchment, to encourage the bringing of plate and hammered money into the mint to be coined"—such duties were so imposed, in order to bear the charge of the recoinage, apparently estimated at 125,000<i>l</i>.</p> <p>5. And by yet another Act, 8 and 9 William III, cap. 8—"An Act encouraging the bringing in wrought plate to be coined"—it was enacted that persons bringing in such wrought plate to be coined between the 1st July, 1696, and 4th November, 1697, should be paid for the same at the rate of 5s. 4d. per ounce, in the new moneys</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1696-97	of the realm, "no deduction for solder, unless in any bottom part of the plate."
	6. There was also enacted the 8 and 9 William III, cap. 26—"An Act for the better preventing the counterfeiting the current coin of the kingdom." (See 1702 and 1708.)
'97-98	There was enacted 9 William III, cap. 2—"An Act to prevent the further currency of any hammered silver coin of this kingdom, and for re-coining such as is now in being, and for the making out new exchequer bills, whether former bills are or shall be filled up by endorsement." From 10th July, 1697, no hammered silver coin to be current, nor the tender thereof a good tender, nor the refusal thereof refusal of lawful coin.
	2. By another Act of same session, 9 William III, cap. 21—"An Act for the better preventing the counterfeiting, clipping and other diminishing the coin of this kingdom"—there is some glimmering of legislative wisdom. It recites: "Whereas the preventing the currency of clipt and unlawfully diminisht and counterfeit money is a more effectuall meanes to preserve the coin of this kingdom entire and pure than the most rigorous laws for the punishment of such as diminish or counterfeit the same;" and further, "the former and ancient laws being grown into disuetude, whereby unlawfully diminisht and counterfeit money or currency, and wicked and trayterous persons are encouraged to diminish and counterfeit the same; now to the end, the kingdom, after so vast a charge and expense for the reformation of the silver coin, and restoring it to its due weight and purity, may not relapse into the same evil from which it hath been so lately delivered with great difficulty and hazard, and that counterfeit and unlawfully diminisht money, which already begins to increase, may be defaced and destroyed, be it declared," &c.
	And it was declared and enacted that persons to whom unlawful money was tendered might break or deface the same; and if counterfeit, the persons tendering the same were to bear the loss. Silver moneys for duties, &c., to be taken by weight.
	3. There was another Act of the same session, 9 William III, cap. 36—"An Act to stop the coining farthings and half-pence for one year"—which recited: "Whereas, by reason of the great quantities of copper farthings and half-pence which have lately been coined and uttered, the same are at present become a burthen and inconvenience to many of his majesty's subjects in several parts of the kingdom." The coinage of these and of "tokens to go for farthings and half-pence," was stopped; and an arrangement was authorised to be made with the contractors for farthings of copper to supply <i>farthings of tin</i> .*

* *Tokens*.—For many centuries, down, in fact, to Charles II (1672), the only authorised current coin in the realm was of gold and silver (except that perhaps the earliest inhabitants of our island had used copper). The silver pence and half-pence had gradually become reduced in size until by reason of their smallness they had become inconvenient. To remedy this, and also to provide change for the increase of retail trade, and above all as a means of advertisement, tokens came to be issued by tradesmen. They were mostly coins of small denominations, and were first issued about the reign of Henry VII. They were variously composed, originally of lead, tin, latten, and even of leather; later on, of copper. In the reign of Elizabeth they greatly increased; and though the silver farthings coined by James I and Charles I for a time supplied the want of small coin, yet in the civil wars the private tokens multiplied to a great excess; and every petty tradesman had his pledges for a half-penny, redeemable in silver or in goods to bearer on demand at his shop; upon the credit of which it therefore depended whether they should circulate

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1700	Abundance of <i>French</i> money in England.—WHITWORTH.
1700-01	By 12 and 13 George III, cap. 11, section 12, the statute of 1666 (continued by several subsequent Acts) was further extended for a period of seven years. <i>Note.</i> —The current cash of the kingdom computed to be 12 millions.
'02	By 1 Anne, cap. 1, the Act of 1696-97, cap. 26, which "hath been found of good use for suppressing the counterfeiting the current coin of this kingdom by such tools and instruments as are therein prohibited," continued in force till 25th March, 1709. The town of Newcastle-upon-Tyne was appointed for assaying and marking wrought plate for coinage, and the silversmiths inhabiting there were constituted into and incorporated as the Company of Goldsmiths of the said town. The rules for marking and assaying wrought plate were as in 12 and 13 William III, cap. 4.
'06	By the Act of union of the two kingdoms of <i>England</i> and <i>Scotland</i> , 6 Anne, cap. 11 [Ruffhead, 5 Anne, cap. 8], article xvi, it was enacted:— "That from and after the union, the coin shall be of the same standard and value throughout the United Kingdom as now in England, and a mint shall be continued in <i>Scotland</i> , under the same rules as the mint in England," &c. And by article xv it had been agreed that the losses "which private persons may sustain by reducing the coin of Scotland to the standard and value of the coin of England may be made good," out of a fund which had been provided for various purposes of adjustment (see 1711).
'08	The 7 Anne, cap. 42—"An Act for continuing the former Act for the encouragement of the coinage, and to encourage the bringing foreign coins and British or foreign plate to be coined, and for making provision for the mints in <i>Scotland</i> , and for the prosecuting offences concerning the coins in England"—continued the statute of 1666 and that of 1672. It then authorised the master and worker of the mint to offer <i>bounties</i> , at 2½ <i>d.</i> per ounce (and not exceeding in the whole 6,000 <i>l.</i> so to be expended), for foreign coins of standard silver brought into the mint between 20th April and 1st December, 1709; the same to be coined into money of this realm.

through one or two streets, a whole town, or some little distance in the country round. The tradesmen on old London Bridge were famous for their tokens.

The "London Gazette" for 25th July, 1672, and 23rd February, 1673, contained proclamations against these tokens, and of the issuing of the first farthing coinage—referring to "the Farthing Office in Fenchurch Street" as the place of exchange.

Again, in 1784, in consequence of the debased condition of the authorised copper coinage, there commenced a general striking and issue of provincial and tradesmen's tokens, foremost amongst which was the now famous Anglesey penny of this date.

The inscriptions or impresses upon these tokens consisted generally of names, residences, initials, and the trade signs of their owners, by whom they were issued and guaranteed. The quantity used in London at one period was so great, that Sir Robert Cotton supposed in 1612 that there were no less than 3,000 persons who issued leaden tokens of the amount of 5*l.* annually on an average, of which they had not one-tenth remaining at the year's end.

Not only did private persons issue tokens, but at a later date some of the more public institutions, as the Bank of England, the Bank of Ireland, &c., issued them, as will be seen by reference to the statutes given later. See 1804 to 1825; this table.

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1708	By another Act of this session, 7 Anne, cap. 25, the Act of 1696–97 (cap 26), as extended in 1697–98 (cap. 21), and in 1702, was made perpetual.
'11	The 10 Anne, cap. 7 [cap. 3 in some editions of statutes]—"An Act for charging and continuing the duties upon malt, mum, cyder and perry for the service of the year 1712 ; and for applying part of the coinage duties to pay the deficiency of the value of plate coined, and to pay for the recovering the old money of Scotland"—tells its own tale sufficiently in its title except in one particular, as to which it is recited as follows :— <p>"And whereas by the accounts that have been given of the charge of recovering of the money in that part of Great Britain called <i>Scotland</i>, pursuant to the articles of union in that behalf, there appears to be due and owing to the provost and moniers of the mint in the Tower of London, a considerable sum of money on the several rates and allowances agreed to be paid them for and upon account of the said recoinage ; and some doubt hath arisen whether the sum or sums so due and owing may legally be taken out of the money arising by the coinage duties, and as the said duties now stand. . . ."</p> <p>And it was enacted that a sum not exceeding 2,700<i>l.</i> 5<i>s.</i> 3½<i>d.</i> might be so applied.</p> <p>The gold coinage at this date in Great Britain was estimated at 12,000,000<i>l.</i>—DAVENANT.</p>
'42	By the 15 George II, cap. 28—"An Act for the more effectual preventing the counterfeiting of the current coin of this kingdom, and the uttering and paying false or counterfeit coin"—it was made high treason to gild <i>silver</i> coin in view of making it resemble <i>gold</i> . This Act recited :— <p>"II. And whereas the uttering of false money, knowing it to be false, is a crime frequently committed all over the kingdom, and the offenders therein are not deterred, by reason that it is only a misdemeanor, and the punishment very often but small, though there be great reason to believe that the common utterers of such money are either themselves the coiners, or in confederacy with the coiners thereof."</p> <p>It was therefore again made felony for the third offence, imprisonment for the first and second.</p>
'59	There was published <i>The Analysis of Trade, Commerce, Corn, Bullion, Banks, and Foreign Exchange</i> . By Philip Cantillon, late merchant of Purden (WATTS). McCulloch says, "late of the city of London, merchant."
'62	The gold coinage was estimated at 16,000,000 <i>l.</i> —ANDERSON.
'73	We now find that the gold coinage was being subjected to similar treatment to that which had been so long experienced by the silver coinage. <p>By 13 George III, cap. 71—"An Act for the better preventing the counterfeiting, clipping, and other diminishing the gold coin of this kingdom"—wherein it is recited :— <p>"Whereas the preventing the currency of clipped and unlawfully diminished and counterfeit money, is a more effectual means to preserve the coin of this kingdom entire and pure than the most rigorous laws for the punishment of such as diminish or counterfeit the same ; and whereas, by the known laws of this kingdom, no person ought to pay, or knowingly tender in payment, any counterfeit or unlawfully diminished money ; and all persons may not only refuse the same, but may, and by the ancient statutes and ordinances of this kingdom have been required to destroy and deface the same, and more particularly the tellers in the receipt of the exchequer, by their duty and oath of office are required to receive no money but good and true ; and to the end that the same might be the better discerned and</p></p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.

- 1773 known by the ancient course of the said receipt of the exchequer, all money ought to be received there by weight as well as tale.”
- It is then enacted that persons to whom gold money should be tendered, diminished otherwise than by reasonable wearing, or appearing to be counterfeit, might cut or deface such money; disputes to be settled by mayors of cities or justices of the peace.
- The gold coinage brought into the mint by proclamation was 1,556,359*l.*; the expense of collecting, melting and recoinng it was 754,019*l.*
- '74 The 14 George III, cap. 42—“An Act to prohibit the importation of light silver coin of this realm from foreign countries into *Great Britain or Ireland*; and to restrain the tender thereof beyond a certain sum”—recites:—
- “Whereas considerable quantities of old silver coin of this realm, or coin purporting to be such, greatly below the standard of the mint in weight, have been lately imported into this kingdom, and it is expedient that some provision should now be made to prevent a practice which may be carried on at this time to the very great detriment of the public.”
- After 1st June this year all coin purporting to be British coin, not of the standard weight, prohibited from being brought into this kingdom, and might be seized and melted down. See 1798.
- '86 The gold coinage estimated at 20,000,000*l.*—CHALMERS.
- '98 The 38 George III, cap. 49—“An Act to revise and continue until the 1st day of January, 1799, an Act [14 George III, cap. 42 (1774)] . . . and to suspend the coinage of silver”—recited:—
- “And whereas his majesty has appointed a committee of his privy council to take into consideration the state of the coins of the kingdom, and the present establishment and constitution of his majesty’s mint; and inconvenience may arise from any coinage of silver until such regulations may be framed as shall appear necessary; and, whereas, from the present low price of silver bullion, owing to temporary circumstances, a small quantity of silver bullion has been brought to the mint to be coined, and there is reason to suppose that a still further quantity may be brought, and it is therefore necessary to suspend the coining of silver for the present.”
- It was therefore resolved to suspend the coinage of silver until 9th May, 1798 [royal assent, 21st June].
- 1800 There was published, “The cause of the present threatened famine traced to its real source, viz., an actual depreciation of our circulating medium, occasioned by its paper currency, with which the war, the shock given to public credit in 1794, the stoppage of the bank in 1797, the bankruptcies of Hamburg in 1799, inundated the country, to accommodate government, and enable the merchants to keep up the price of their merchandize. Showing by an arithmetical calculation, founded on facts, the extent, nay the very mode of the progress which the paper system has made in reducing the people to paupers, with its only apparent practical remedy. By COMMON SENSE.” 8vo., 28 pp. Motto on title page, “Depreciate the value of my money” and you take from me the means of subsistence to that amount. That is the gist of the argument of the author.
- The gold coinage of the kingdom was estimated at 37,000,000*l.*—PHILLIPS. [Evidently an over-estimate, see 1830.]
- Also a pamphlet, “Cause of the present threatened famine traced to its real source, viz., an actual depreciation of our circulating medium by paper currency.” 8vo.
- '02 There was published, “Profusion of Paper Money, not deficiency in Harvests; Taxation not Speculation; the principal causes of the Sufferings of the People.” By a Banker. 8vo.
- '04 By 44 George III—cap. 71, “An Act to prevent the counterfeiting of

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.		
1804	....	<p>silver coin issued by the governor and company of the Bank of England, called <i>dollars</i>, and silver coin which may be issued by the governor and company of the Bank of Ireland, called <i>tokens</i>; and to prevent the bringing into the United Kingdom, or uttering any counterfeit dollars or tokens"—it is recited:—</p> <p>"Whereas the governor and company of the Bank of England have for the convenience of the publick, lately caused to be coined or stamped, and circulated, a large quantity of silver dollars, containing on the obverse side thereof an impression of his majesty's head, and the following words and letters, <i>videlicet</i>, 'Georgius III Dei Gratia Rex,' and on the reverse side thereof the impression of 'Britannia,' and the following words and figures, <i>videlicet</i>, 'Five shillings dollar Bank of England 1804.' And whereas the governor and company of the Bank of England are preparing and intend to issue for the convenience of the publick, in that part of the United Kingdom called <i>Ireland</i>, a quantity of silver coin denominated <i>tokens</i>, containing on the obverse side thereof the same impression, words, and letters as the said dollars, and on the reverse side thereof the impression of Hibernia, and the following words and figures, 'Bank of Ireland Token 1804, Six Shillings.' And whereas for the security of the publick it is expedient to prevent the counterfeiting of the said respective coins."</p>
'05	....	<p>It was therefore enacted that persons counterfeiting the said dollars or tokens should be guilty of felony, and persons uttering or vending counterfeits were to be liable to six months' imprisonment.</p> <p>There was enacted, 45 George III, cap. 42—"An Act to extend the provisions of an Act made in the last session of parliament for preventing the counterfeiting of certain silver coin issued by the banks of <i>England</i> and <i>Ireland</i> respectively, to silver pieces, which may be issued by the governor and company of the Bank of Ireland, called <i>tokens</i>; and to promote the circulation of the said tokens"—which recited:—</p> <p>"Whereas the governor and company of the Bank of Ireland are preparing and intend to issue for the convenience of the public, in that part of the United Kingdom called <i>Ireland</i>, a quantity of silver pieces denominated tokens, of the common standard of <i>Spanish</i> pillar dollars, containing on the obverse side thereof an impression of his majesty's head, and the following words and letters, <i>videlicet</i>, 'Georgius III Dei Gratia,' and on the reverse side thereof the following words and figures, 'Bank Token Five-pence Irish 1805,' each such token for fivepence containing in weight one-thirteenth part of the common weight of the <i>Spanish</i> pillar dollar, and each such token for tenpence containing two such thirteenth parts. And whereas for the security of the publick it is expedient to prevent the counterfeiting of the said respective tokens."</p>
'08	....	<p>And the like punishments as under the former Act were enacted.</p> <p><i>Such tokens issued during restrictions on Bank of Ireland to be received in payment of the revenue.</i></p> <p>The 48 George III, cap. 31—"An Act to extend the provisions of an Act made in the forty-fifth year of his present majesty's reign, for preventing the counterfeiting of certain silver tokens, to certain other tokens, which may be issued by the governor and company of the Bank of <i>Ireland</i>, and to promote the circulation of the said last-mentioned tokens"—recited that the Bank of <i>Ireland</i> was preparing and would issue in Ireland a "Bank Token xxx pence Irish," each such token containing in weight six-thirteenth parts of the common weight of a <i>Spanish</i> pillar dollar; also that the coins mentioned in the Act of 1805 had been issued with the figures 1806, instead of as described in the Act. Persons counterfeiting these coins or any of them to be guilty of felony. New coins to be taken in payment of revenue.</p>

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.

- 1811 By 51 George III, cap. 110—"An Act to prevent the counterfeiting of silver pieces denominated tokens, intended to be issued and circulated by the governor and company of the *Bank of England*, for the respective sums of five shillings and sixpence, three shillings, and one shilling and sixpence; and to prevent the bringing into the kingdom or uttering any such counterfeit pieces or tokens"—it is recited:—

"Whereas the governor and company of the Bank of England, with the approbation of his majesty's most honourable privy council, are preparing to make and stamp, and intend to issue and circulate for the convenience of the public, a quantity of silver pieces, denominated *tokens*, for the respective sums of five shillings and sixpence, three shillings, and one shilling and sixpence. . . ."

Then follows a detailed description of the coins; and penalties for counterfeiting or bringing counterfeit tokens into the kingdom. Powers of searching suspected houses.

- '11 The 51 George III, cap. 127—"An Act for making more effectual provision for preventing the current gold coin of the realm from being *paid or accepted for a greater value than the current value of such coin; for preventing any note or bill of the governor and company of the Bank of England from being received for any smaller sum than the sum therein specified*; and for staying proceedings upon any distress by tender of such notes"—sufficiently expresses its purpose in its title. It was passed in a period of scarcity of grain.

- '12 By 52 George III, cap. 157—"An Act to prevent the issuing and circulating of pieces of gold and silver, or other metals usually called *tokens*, except such as are issued by the Banks of England and Ireland respectively,"—it is recited:—

"Whereas various pieces of gold and silver, and mixed metals composed in part of gold or silver, usually denominated tokens, have lately been and are issued and circulated by persons residing in various parts of the United Kingdom, in great quantities, for nominal sums of money usually expressed therein, much above the real value of the metals of which the same are composed. And whereas it is expedient that the further making and issuing of such tokens should be prohibited, and the circulation of those already made or issued should also be prohibited for a limited period."

No tokens already made to be issued, and none to circulate after 25th March, 1813; but they might be presented for payment to original issuer, who was not to be relieved from payment by the operation of this Act. Act not to apply to Banks of England and Ireland.

- '13 There were several enactments this year:—

1. By 53 George III, cap. 19, "An Act to amend an Act of the last session of parliament to prevent the issuing and circulating pieces of gold and silver or other metal usually called *tokens*, except such as are issued by the Banks of England and Ireland respectively." The period at which the circulation of tokens (other than those of the Banks of England and Ireland) was to cease was extended to 5th July, 1813.

2. The 53 George III, cap. 106—"An Act to extend the provisions of an Act made in the forty-fifth year of his present majesty's reign, for preventing the counterfeiting of certain silver tokens, to certain other tokens which have been or may be issued by the governor and company of the Bank of *Ireland*"—recites:—

" . . . And whereas the governor and company of the Bank of Ireland have issued, or are preparing to issue in Ireland, for the convenience of the public, a quantity of silver pieces denominated tokens, of the common standard of Spanish pillar dollars, for thirty pence, Irish currency, each"

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1813	Then follows a detailed description of the coin, as also of a new issue of tenpenny and fivepenny tokens dated this year. Then there are penalties for counterfeiting. These tokens might be received in payment of revenue.
	3. The 53 George III, cap. 114, "An Act to continue and amend the Act of the present session, to prevent the issuing and circulating of pieces of gold and silver or other metals, usually called <i>tokens</i> , except such as are issued by the Banks of England and Ireland respectively"—extended the period at which the circulation of tokens was to cease until six weeks after the commencement of the next session of parliament.
	4. By 54 George III, cap. 4, the period for staying the circulation of tokens (other than those of the Banks of England and Ireland) was extended to six weeks after the commencement of the then next session of parliament.
	Mr. S. T. Galton published, "Chart, Exhibiting the relation between the amount of Bank of England notes in circulation, the rate of Foreign Exchanges, the Prices of Gold and Silver, Bullion and Wheat."
'13	There was also published, <i>Further Considerations on the State of the Currency</i> . By Lord Lauderdale. 8vo., Edinburgh.
'15	There was published, "Cobbett's paper against gold, containing the history and mystery of the Bank of England, the funds, the debt, the sinking fund, the bank stoppage, the lowering and the raising of the value on paper money, and showing that taxation, pauperism, poverty, misery, and crimes have all increased and ever must increase with a funding system."
'16	There was enacted 56 George III, cap. 68—"An Act to provide for a new silver coinage, and to regulate the currency of the gold and silver coin of this realm"—which recites:—
	"Whereas the silver coins of the realm have by long use and other circumstances become greatly diminished in number and deteriorated in value, so as not to be sufficient for the payments required in dealings under the value of the current gold coins, by reason whereof a great quantity of light and counterfeit silver coin and foreign coin has been introduced into circulation within this realm; and the evils resulting therefrom can only be remedied by a new coinage of silver money to be made and issued under proper regulations for maintaining its value and preserving the same in circulation."
	The Act of 1666 was then in part repealed, and also so much of 1695-96 (cap. 1); "and also so much of all and every other Act and Acts as declare, enact or provide that the weight and trueness prescribed by any indenture therefore made with his majesty's master and worker for making of silver monies at the Tower of London shall be and remain to be the standard of and for the lawful silver coin of the kingdom."
	It was enacted that the pound troy of standard silver, 11 ounces 2 pennyweights fine silver, and 18 pennyweights of alloy might be coined into 60s. Also that the old coinage of the realm brought to the mint might be exchanged for its full nominal value in new silver coin.
'17	1. By 57 George III, cap. 46—"An Act to prevent the issuing of pieces of copper or other metal, usually called <i>tokens</i> "—it is recited:—
	"Whereas various pieces of copper and mixed metals composed in part of copper, usually denominated <i>tokens</i> , have lately been, and are issued and circulated, by persons residing in various parts of the United Kingdom, in great quantities as money, and for a nominal value of the metals of which they are composed; And whereas it is expedient that the further making and issuing of such <i>tokens</i> should be prohibited, and that the circulation of those already made or issued should also be prohibited after a limited period."

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.

1817

It is then enacted that from and after the passing of this Act, no piece of copper or mixed metal composed in part of copper, of whatever value the same might be, should be made or manufactured, or originally issued as a token for money, or as purporting that the bearer or holder thereof was entitled to demand any value denoted thereon, either by letters, words, figures, marks or otherwise, whether such value was to be paid or given in money or goods, or in any manner whatsoever. And penalties were imposed upon the circulation of any such tokens after 1st January, 1828. It was further recited:—

“III. And whereas certain tokens made of copper or of a mixed metal composed partly of copper, and bearing the subscription ‘*Sheffield Penny Token*,’ were issued from time to time during the years 1812, 1813, 1814, and 1815, by the overseers of the poor of the township of Sheffield, in the county of York; and whereas the immediate suppression of the circulation of the aforesaid tokens would be attended with great loss to the said township of Sheffield, and to the holders thereof, who are for the most part labourers and mechanics, as well as with great inconvenience to the inhabitants of the town of Sheffield and the neighbourhood thereof.”

These Sheffield penny tokens were therefore to be allowed to circulate until 25th March, 1823. And it was further recited:—

“VI. And whereas certain other tokens made of copper, or of a mixed metal composed partly of copper, and bearing the superscription ‘*Birmingham One Penny*,’ were issued from time to time during the years 1812-15, by the overseers of the poor of the parish of Birmingham, in the county of Warwick; and whereas the immediate suppression of the circulation of the aforesaid tokens would be attended with great loss to the said parish of Birmingham, and to the holders thereof, as well as great inconvenience to the inhabitants of the town of Birmingham and the neighbourhood thereof.”

All such tokens to be called in before 25th March, 1820.

2. By 57 George III, cap. 113—“An Act to prevent the further circulation of dollars and tokens issued by the governor and company of the Bank of England, for the convenience of the public”—the Acts of 1804 and 1811 are recited:—

“And whereas, in consequence of the recent circulation of the new current silver coin, it becomes unnecessary any longer to continue the said dollars and tokens in circulation, and it is expedient to prohibit further circulation thereof after a time to be limited.”

The circulation was therefore to cease after 25th March, 1818; but they might be presented to the Bank of England for payment up to 25th March, 1820, and might be disposed of for old silver at the current price of silver.

’18 The Act of last session (chapter 113) was by 58 George III, cap. 14, altered to the extent that the tokens might be employed up to 5th April, 1819, in payment of government dues, taxes, &c.

’21 A series of tables, exhibiting the gain and loss to the fundholders arising from the late fluctuations in the value of the currency from 1800 to 1821. By Robert Musket, Esq. Second edition. London.

’21 Mr. J. C. McCulloch contributed to the *Edinburgh Review* a paper, “On Pernicious Effects of Degrading the Standard of Money,” Article XI, July, 1821. A most excellent article, from which I have drawn some contributions for this paper.

’25 The 6 George IV, cap. 98—“An Act to prevent the further circulation of *tokens* issued by the governor and company of the Bank of Ireland, for the convenience of the public, and for defraying the expense of exchanging such tokens”—recites the issuing of the said tokens under the authority of the Acts already reviewed:—

“And whereas in consequence of the recent issue of a new current

TABLE XI.—*Currency Restrictions, Legislative and Otherwise—Contd.*

A.D.	
1825	silver coin in Ireland, it becomes unnecessary any longer to continue the said tokens in circulation, and it is expedient to prohibit the further circulation thereof after a time to be limited.”
	The said tokens were not to circulate after 5th January, 1726, and the Bank of Ireland was not to be compelled after that date to redeem them at their nominal value. They might after that date be sold as old silver.
	The Treasury was to issue a sum not exceeding 500,000 <i>l.</i> to exchange for or buy up the said tokens.
	And so ended the circulation of <i>tokens</i> , which had probably for several centuries played a more or less important part in our national currency.
'26	The coinage of Ireland assimilated to that of England.
'30	The Duke of Wellington estimated the gold coinage at 28,000,000 <i>l.</i> , and the remainder of the metallic currency at 13,000,000 <i>l.</i> ; total, 41,000,000 <i>l.</i>
'31	An Historical Inquiry into the Production and Consumption of the Precious Metals. By William Jacob, Esq., F.R.S. 2 vols. “Though perhaps the best on the subject, the work is very defective.”—McCULLOCH.
'37	There was published, “Money and its Vicissitudes in Value, as they affect National Industry and Pecuniary Contracts; with a Postscript on Joint Stock Banks.” (See 1857.)
40	Mr. James Wilson published, “Influence of the Corn Laws, as affecting all Classes, and particularly the Landed Interests.” 8vo. Second edition.
'40	There was published, A Letter to Kirkman Finlay, Esq., on the Importation of Foreign Corn, and the Value of the Precious Metals in Different Countries. By James Pennington, Esq. London. 8vo.
'46	The Philosophy of Trade—An examination of the principles which determine the relative value of Corn, Labour, and Currency. By Patrick James Stirling. 8vo.
'53	Mr. William Newmarch, F.R.S., published, “The new Supplies of Gold: Facts and Statements relative to their actual amount, and their present and probable effects.”
'56	Mr. Charles Jellicoe contributed to the <i>Assurance Magazine</i> , of which he was then editor, a short paper, “Comparative Value of Gold in different Countries,” wherein he points out that while the ounce of standard gold is valued at 3 <i>l.</i> 17 <i>s.</i> 10½ <i>d.</i> , one-twelfth of it being alloy, the ounce of pure gold will be worth one-eleventh more, making 84'9778.
'57	There was published, “Money and its Vicissitudes in Value, as they affect Industry and Pecuniary Contracts,” by the author of a “Critical Dissertation on Value,” &c. 8vo. (See 1837.)
'59	There was published a now widely known work, “On the [probable Fall in the value of Gold: the commercial and social consequences which may ensue, and the measures which it invites.” By Michael Chevalier, translated from the French, with preface by Richard Cobden, Esq.
'63	There was published by Professor Jevons, “A serious Fall in the Value of Gold ascertained, and its Local Effects set forth.” With two diagrams.
'65	There appeared in the <i>Journal of the Statistical Society of London</i> , vol. xxviii, p. 294, a paper “On the Variation of Prices and Value of the Currency since 1782.” By W. Stanley Jevons, &c.
'66	Mr. Charles Willich published a table showing (<i>inter alia</i>) the price of consols, the bank rate of discount, and the price of wheat from July, 1844 (passing of Bank Charter Act) to May, 1866.
'69	“Letter on the Value of Gold.” <i>Economist</i> , 8th May. Reprinted in the <i>Statistical Journal</i> , vol. xxxii, p. 445.

XI.—*Speculation.*

In my remarks upon legislative interference (in section 9 of this paper), I have shown how it became incumbent to enact laws against "speculation" in grain and other food stuffs, known technically as forestalling, engrossing, regrating, &c. It was a necessary prop to uphold a tottering and unsound system of legislative interference with commercial affairs. These laws were in their nature arbitrary, and could only be tolerated because they appeared to be made in the interest of the people. That their design was in this direction is manifest, and it seems clear that the people so regarded them, or they never could have been continued throughout so many centuries; and would not have been renewed, extended, and supplemented as they were from time to time in parliament. It must be always assumed that any legislation which appears to secure cheap food for the people will be popular with the masses, however unjust and tyrannical as against individuals or classes.

It may indeed be that there were in operation in the past causes, which, while we cannot realise them now, seemed to justify even all these laws attempted to accomplish; or it may simply be that such laws, originated in defiance of all known principles of political economy, were allowed to continue in a like spirit of defiance. It is certain that Adam Smith and his followers did kill them out, although they died a very hard death, as reference to the concluding portion of Table XII will make apparent.

I have looked with curiosity, bordering upon anxiety, for a writer who should defend these laws on any principle of rational argument; but have not found one. In my search, however, I did discover a document—nothing less than a report by a select parliamentary committee of the House of Commons, from which I propose to quote certain passages for the edification of all whom they may now concern or interest.

"A report from the committee who (upon the 8th day of February, 1764) were appointed to inquire into the causes of the present high price of provisions, with the proceedings of the house thereupon. Published by order of the House of Commons." (Folio, pp. 6.) From this document I take the following passages:—

"Mr. Winter, Orton and Jones, agreed in stating the present price of the best beef to be 3*d.* per pound to the vendor, which is about one $\frac{1}{2}$ *d.* dearer than beef of the same goodness has usually been in the month of March for some years past; to which point the committee brought all the witnesses in giving their evidence: *imagining it to be necessary, in determining a comparative price, to adhere to the same month, and to meat of the same goodness.*

"The witnesses stated the present price of the choice pieces of the best beef to be, to the customer, 4*d.* and 4 $\frac{1}{4}$ *d.* per pound; the best pieces of inferior beef 3*d.* or 3 $\frac{1}{4}$ *d.*; and the coarser pieces of beef in general from 1 $\frac{3}{4}$ *d.* to 2 $\frac{1}{2}$ *d.* and 2 $\frac{3}{4}$ *d.* *which is $\frac{1}{2}$ *d.* dearer than the same have usually been in the month of March. . .*"

"The same witnesses admit the present price of mutton also to be higher than it used to be in March, but they state the increase differently from $\frac{1}{4}d.$ to a $\frac{1}{2}d.$ per pound."

In view of discovering the causes of this increase of price, the committee examined several "eminent" meat salesmen, who alleged, first, the increased demand in London, which on being pressed they could not sustain, next:—

"They then accounted for this increase of the price of meat by the want of pork at market, proceeding from the great plenty of acorns in 1762, which induced all the Feeders to Fatten their whole Stock of Hogs in that year, which extraordinary slaughter they allege is not yet replaced; and that the want of one article in the General Provisions of so populous a City as *London* has necessarily advanced the Prices of other Species. The whole Demand acting upon the whole Quantity of the different sorts of Provisions as upon one and the same Subject.

"They added also, that the wet season had much lessened the Weight of even Fat Cattle; that the great Scarcity of Fodder in 1762, had reduced the Breed and Stock; and that the failure in the Crop of Turnips in several Counties this year, had prevented those Counties fattening the usual quantities of Beasts. They assigned also the low price of Hides and Tallow as an additional Reason. But upon further examination, all the Salesmen and Butchers admitted *that the present High Price is not entirely or exclusively the effect of Natural Causes, but an Artificial Price, resulting from Combinations, and the want of better Regulations for the sale of Cattle in Open Markets.*"

They fell back upon the evils of engrossing and forestalling, and on this point I have already quoted from this same report in the following table.

Note.—In 1362 (36 Edward III) a petition was presented to the king, which complained "that great mischiefs had newly arisen, as well to the king as to the great men and commons, from the merchants *Grocers*, who engrossed all manner of merchandise vendible, and who suddenly raised the price of such merchandise within the realm; putting to sale by covin and by ordinances made among themselves in their own society, which they called the 'Fraternity and Gild of Merchants,' such merchandises as were most dear, and keeping in store the others until times of dearth and scarcity." The "Fraternity" here complained of is now the famous "Company of Grocers" in the city of London, originally a "Craft Gild."—*English Gilds*, p. cxxiii.

TABLE XII.—*Speculation in Grain and Other Articles of Food, known as “Engrossing,” “Forestalling,” and “Regrating.”*

- A.D.
1266 In the *Judicium Pillorie* (the judgment of the pillory), attributed to this date (51 Henry III), is contained, among the offences for which persons are to “suffer this judgment of the body,” the following:—
 “And also forestallers that buy anything afore the [due and accustomed hour] against the regulation [good state and weal] of the town and market, or that pass out of this town to meet such things as come to the market [and buy] out of the town, to the intent that they may sell the same in the town more dear to regrators [that utter it more dear] than they would that bought it, in case they had come to the [town or] market.”
- '72 The *Liber Albus* declares (*inter alia*), the following to be articles of ancient usage, in the city of London, “that ought each year, after the feast of St. Michael, to be proclaimed throughout the said city.”
Of Forestallers. “And that no dealer, denizen, or stranger, whoever he may be, shall go to meet dealers coming by land or by water with their merchandise and victuals towards the city, to buy or to sell, until such time as they shall have arrived at the said city, and have put up their merchandise for sale; under forfeiture of the article sold, and pain of imprisonment. . . .
 “And that no merchant, denizen, or stranger, whoever he may be, shall go to the pole [*i.e.* Pool, from the tower to Limehouse], or any other place in the Thames, to meet wines or other merchandise, or go on board of vessels to buy wines or other things, until such time as they shall have come to land, under pain of losing the article.”
Of Regrators. “And that no regrator of corn, of fish, or of poultry, shall buy provisions for resale, before the hour of prime rung at St. Paul’s; or before the substantial men of the land and of the city shall have bought their provisions, under pain of losing the article bought.
 “And that no market shall be held upon London bridge, but [only] elsewhere in the city where they are established, under pain of losing the article [sold].
 “Also it is forbidden that if any one shall be so daring as to go on board of vessels or boats that bring scallops, mussels, welks, and cockles, or any other victuals, when they have arrived, for the purpose of regrating the same, under pain [of losing] the article. But the same shall stand for common sale by him who shall have bought such wares, that so the community may be served without regrators; and under this pain of losing the article. And if any such person shall be found, he shall be heavily punished.”
- '85 In the *Statutum de Pistoribus* (statute concerning bakers, &c.), sometimes attributed to 51 Henry III, but more generally to 13 Edward I, which latter we adopt, is contained the following, defining forestallers and awarding their punishment:
 “But especially be it commanded on the behalf of our lord the king, that no forestaller be suffered to dwell in any town, who is an open oppressor of the poor people, and [of all the commonality, and an enemy of the whole shire and county, who, for greediness of his private gain, doth prevent others in buying grain, fish, herrings, or any other thing to be sold coming by land or water] oppressing the poor and deceiving the rich [who carrieth away such things intending to sell them more dear], the which come to merchants, strangers, that bring merchandise, offering them to buy, and informing them that their goods might be dearer sold than they intended to sell; and [by that means unjustly goeth about to sell the things much dearer than he who brought them] an whole town or county is deceived by such craft and subtlety.
 “He that is convict thereof, the first time shall be [amerced], shall lose the thing so bought, and that according to the customs and

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.		
1285		ordinance of the town; he that is conviet the second time shall have judgment of the pillory; at the third time he shall be imprisoned and make fine; the fourth time he shall abjure the town. And this judgment shall be given upon all manner of forestallers, and likewise upon them that have given them counsel, help, or favour."
1318	By 12 Edward II (<i>Statute of [Ebor] York</i>), cap. 6, no officer in any city or borough, who ought by his office to keep assise of wine and victuals, should trade therein during his term of office. There is understood to have been an Act passed either in this or one of the preceding reigns, intituled, "No forestaller shall be suffered to dwell in any town."	
'49	The 23 Edward III, cap. 6, contains some provisions indirectly affecting regrators (<i>see</i> Table IX).	
'50	By 25 Edward III, statute 4, cap. 2—"The penalty of him that doth forestall wares, merchandise, or victual"—it is enacted: "Item—And it is accorded and established, that the forestallers of wines and other victuals, wares, and merchandise that come to the good towns of <i>England</i> by land or water, in damage of our lord the king and his people, if they be thereof attainted at the suit of the king, or of the party, before mayor, bailiffs, or justices, thereto assigned, or elsewhere in the king's court; and if they be attainted at the king's suit by indictment, or in any other manner, the things forestalled shall be forfeited to the king, if the buyer thereof hath made free to the seller; and if he have not made free of all, but by earnest, the buyer shall incur the forfeiture of as much as the forestalled goods do amount to, after the value as he bought them, if he have whereof; and if he have not whereof, then he shall have two years' imprisonment and more, at the king's will, without being let to mainprise, or delivered in other manner; and if he be attainted at the suit of the party, the party shall have one-half of such things forestalled and forfeit, or the price, of the king's gift, and the king the other half."	
'53	By 27 Edward III, statute 1, cap. 3, it was enacted: "Item—For the great and outrageous dearth of victuals which hostelers, herbingers, and other regrators of victuals make through the realm, to the great damage of the people paying through the realm, it is accorded and established, that the justices, learned in the law, who be good and convenient, shall be newly chosen to inquire of the deeds and outrages of such hostelers, regrators, labourers, and all other comprised in the statute another time thereof made and them to punish, and moreover to do right to the king and his people; saving always to every lord and other their franchises in all points." Chapter 5 of the same statute made it felony to forestall, or ingross Gascoin wine. Same year the 27 Edward III, statute 1, cap. 11, enacted as follows:— "Item—We have ordained and established that all merchants, aliens, and denizens, and other that do bring wine and other wares, or merchandises whatever they be to the staples, cities, boroughs, and good towns, or to ports of the sea, within our said realm and lands, may safely and without challenge and impeachment to any, sell them in gross or at retail, or by parcels at their will, to all manner of people that will buy the same; and that no merchant, privy, nor stranger, nor other of what condition that he be, go by land nor by water to encounter such wines, wares, or merchandises, coming into our said realm and lands, in the sea, nor elsewhere, to forestall or buy them, or in other manner to give earnest upon them, before that they come to the staples, or to the port where they shall be discharged, nor enter into the ships for such cause, till the merchandise be set to land to be sold, upon the pains and forfeiture contained in the same third article aforesaid."	

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1353	The penalties imposed by the third chapter of this Act were "life, and member," <i>i.e.</i> , life and limb.
'54	By the 28 Edward III, cap. 13, it was enacted— <p>"And that no manner of ship, which is fraught towards England or elsewhere, be compelled to come to any port of England, nor here to abide, against the will of the master and mariners of the same, or of the merchants whose the goods be; and if such ships come of their own good will, or be driven by tempest or other misfortune or mischief, to any port in England, and the masters, mariners, or merchants of the same ships will sell or deliver part. Part of their merchandise, with their good will, it shall be lawful for every man to buy such merchandise freely without impeachment in the port where such ships shall come, albeit the said merchandise be not put to land to sell; <i>so always that no merchant nor other shall go by land nor by water to meet such ship charged with merchandise to forstall the same merchandises, or to give earnest upon them by way of forestalling.</i>"</p>
'57	The 31 Edward III, statute 2—"An ordinance made concerning the selling of herrings," recited as follows:— <p>"Forasmuch as the commons of the realm of England, at the parliament holden at Westminster on Monday next after the week of Easter, the year of the reign of our lord the King Edward III of England xxxi, and of France xviii, have complained them to our lord the king because that the people of Great Yarmouth do encumber the fishers bringing herring to the said town in the time of the fair, <i>and do buy and forestall the herring before they do come to the town;</i> and also the hostelers of the same town that lodge the fishers coming thither with their herring will not suffer the said fishers to sell their said herring, nor meddle with the sale thereof, but sell them at their own will as dear as they will, and give to the fishers that pleaseth them, whereby the fishers do withdraw themselves to come thither; and so is the herring set at much greater price than ever it was, to the damage, to the great damage of our lord the king, of the lords, and of all the people: wherefore our lord the king seeing the mischief in this behalf, by the assent of the great men and all the commons, hath ordained and established remedy upon the said mischiefs, in the form as followeth:—</p> <p>"I. First, that no herring be bought or sold in the sea, till the fishers be come unto the haven with their herring, and the cable of the ship be down to the land.</p> <p>"II. <i>Item</i>—That the fishers be free to sell their herring to all that come to the fair of Great Yarmouth without any disturbance of their hostelers, or any other; and when the fishers will sell their merchandises in the port, they shall have their hostelers with them, if they there will be, and in their presence, and in the presence of other merchants, openly shall sell their merchandises to whomsoever they please; and if any other merchants present are willing to have part, let every one who claims have his part for the price, after the rate of the same merchandise so sold; and the said sale shall be made from the sun rising till the sun going down, and not before and not after, upon forfeiture of the same merchandises: and that the said fishers be free to buy their victuals, and that which they need, where it shall please them. <i>And that no hostelers, nor other, buy any herring for to hang in their houses by covin, nor in other manner at an higher price the last than 40s.; but less in as much as he may, according as he may agree with the seller;</i> and that no hostelers nor any of their servants, nor any other whatsoever he be, coming to the said fair, shall go by land nor by sea to forestall herring privily nor openly, but the herring shall come freely unsold into the haven: nor that any rover make buying of fresh herring in the houses of Yarmouth,</p>

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1357 ...	betwixt the feasts of St. Michael and St. Martin, upon pain of imprisonment at the king's will, and to forfeit all the herring so bought. And that no vessel called pyker [rover], of London, nor of none other place, shall enter into the said haven to abate the fair in damage of the people, upon the pain of forfeiture of their vessel and all their chattels found within."
	The later portion of this statute (which was to extend to all the towns in England wherein herring is taken) enacted the price at which herring were to be sold, as given in Table IX.
'60 ...	The last-named ordinance was very much modified this year, <i>see</i> Table IX.
'63 ...	The 37 Edward III—"A statute concerning diet and apparel," recites :—
	"V. <i>Item</i> —For the great mischiefs that have happened as well as to the king, as to the great men and commons, of that that the merchants, called grocers, do ingross all manner of merchandise vendible; and suddenly do enhance the price of such merchandise within the realm, putting to sale by covin and ordinance made betwixt them, called the Fraternity and Gild of Merchants, the merchandise which be most dear, and keep in store the other, till the time that dearth or scarcity be of the same: it is ordained, that no English merchant shall use no ware nor merchandise by him nor by other, nor by no manner of covin, but only one, which he shall choose betwixt this and the Feast of Candlemas next ensuing."
	Surveyors, consisting of "good people and lawful of every merchandise," were to be appointed to see to the due carrying out of these provisions.
	The Act of this year was repealed by 38 Edward III, cap. 2 (1363-64), under which all buying and selling was declared <i>free</i> , with certain reservations mentioned in Table X.
'78 ...	By 2 Richard II, statute 1, cap. 2, it was ordained and established that the statute made in the time of King Edward, the grandfather, the twenty-fifth year of his reign, of forestallers of wines, wares, and merchandise which come to the good towns within the realm by land or by water, should be holden and firmly kept at all points, and put in due execution, for the common profit of the said realm.
'83 ...	By 6 Richard II, statute 1, cap. 11, it was ordained as follows :—
	<i>Item</i> .—It is ordained, that all manner of hosts, as well in the city of London, and the towns of Great Yarmouth, Scarborough, Winchelsea, and Rye, as also in certain other towns and places upon the coast of the sea and elsewhere through all the said realm, as well within the liberties as without, shall from henceforth utterly cease to be moved from the noyance and wicked deeds and forestallings; and in especially they be inhibited by our sovereign lord the king, that they nor none of them, upon the pain that belongeth, shall any further intromit to embrace herring or any fish or other victuals, under the colour of any custom, ordinance, privilege, or charter before made or had to the contrary, which by tenour of these presents be utterly repealed; or privily or aferlty do, or procure to be done any impediment to any fishers or victuallers, denizens or aliens being of the king's country, whereby they or any of them be compelled to sell their fish or other victuals, but where and when, and to any person whatsoever they will within the said realm at their pleasure. And moreover, it is especially inhibited to all and singular the said hosts, that none of them upon the pain aforesaid intromit from henceforth [of buying, selling, or covenanting] any manner sea fish fresh to the use of any fishmonger, or other citizen of the said city of London; and likewise it is inhibited to all fishmongers and other citizens of the same city of London, that none of them upon the same pain, far from the city or near the same, from henceforth by any sea fish fresh, nor of the fresh

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1383	<p>water, to sell again in the same city except eels fresh and lucas and pykes, which shall be and remain in common as well to denizens as foreigners, to buy or sell, so that nevertheless the denizens shall in no wise let the foreigners within the same city, to sell such fish, as often as they shall bring or cause to be brought the same fishes to the said city.</p>
	<p>Other statutes against the forestalling of fish will follow.</p>
1464	<p>There was an Act of the parliament of <i>Ireland</i>, 8 Edward IV, cap. 2— “An Act against engrossers and regrators of Corn,” as follows :—</p>
	<p>“Whereas diverse persons having themselves great abundance of all manner of corn, have used to buy to the common market great store of corn to granell up the same to sell upon a dearth, and also diverse other persons called badgers, have used to goe to one market and have bought great store of wheat and corne at one price, and shortly after have taken the same corne into another market, and have there sold at a more deer price by two pence or four pence in the bushel, <i>which hath been the greatest means of dearth within this land, and the great and intolerable hurt of the poor inhabitants of this land of Ireland.</i> Therefore it is ordained and established by the authority of the said parliament, <i>that no man having sufficient store of corne of his own, shall buy any manner of corne in the common market,</i> nor that no other person nor persons called badgers shall buy any manner of corne in the form aforesaid, upon such payn as is made against the regrators in the king’s market, and they and every one of them to be judged in the law as common regrators in the market. Also that it shall not be lawful to no man (<i>sic</i>), of whatever condition soever he be, which will buy any manner of corne in the common market to sell the same againe in the same market, nor in no other market, upon pain to be adjudged in law as a common regrator in the market.”</p>
1503....	<p>There was enacted in the parliament of <i>Scotland</i> (cap. 31), a statute “of malt mekaris in Burrow Towns,” understood to be directed against engrossing.</p>
	<p>2. The 25 Henry VIII, cap. 2, “Proclamations for the prices of victuals, viz., the prizing of them, and proclaiming the prices,” which recites : “<i>Forasmuch as dearth, scarcity, good, cheap, and plenty, of cheese, butter, capons, hens, chickens, and other victuals necessary for man’s sustenance, happeneth, riseth, and chanceth of so many and divers occasions that it is very hard and difficult to put any certain prices to any such things</i> (2), and yet nevertheless the prices of such victuals be many times enhanced and raised by the greedy covetousness and appetites of the owners of such victuals, by occasion of ingrossing and regrating the same, more than upon any reasonable or just ground or cause, to the great damage and impoverishing of the king’s subjects.”</p>
	<p>For remedy whereof it was enacted that the king’s councillors, justices, and officers, <i>should have power and authority from time to time as the case shall require, to set and tax reasonable prices of all such kinds of victuals above specified, how they shall be sold in gross, or by retail, for the relief of the king’s subjects ; and that after such prices set and taxed in form aforesaid, proclamation shall be made in the king’s name, under the great seal, of the said prices in such parts of the realm as should be convenient for the same.</i> Then the following :—</p>
	<p>“II. And be it enacted, That all fermors, owners, broggers, and all other victuallers whatsoever having or keeping any of the kinds of victuals afore rehearsed, to the intent to sell, <i>shall sell the same to such of the king’s subjects as will buy them, at such prices as shall be set and taxed by the said proclamation,</i> upon the pains to be expressed and limited in the said proclamation, to be lost, forfeited, and levied to the king’s use, in such wise as by the same proclamation shall be declared.</p>

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D. 1503	<p>"III. Provided always, that this Act or anything therein contained, shall not be hurtful to mayors, sheriffs, bailiffs, or other officers of cities, boroughs, or towns corporate, or to any other person or persons, or bodies politick, <i>having authority to set prices of such victuals, or of any of them; but that they and every of them may set prices thereof as if this Act had never been had nor made.</i>"</p> <p>Then there is a provision against transporting victuals out of the realm without license. See Table X.</p>
'35	An Act of the parliament of <i>Scotland</i> , cap. 26, was passed this year and entitled "off forstallaris."
'40	There were several Acts made in the parliament of <i>Scotland</i> this year being against forestalling, &c., viz.: 1 (cap. 16), "For eschewing of dearth of wittallis, flesche and fysche." 2 (cap. 18), "For stanching of derth and prices of wyne, salt, and tynmer." 3 (cap. 32) "Anentis forstallaris."
'49	<p>The 3 and 4 Edward VI, cap. 19—"An Act for buying and selling of rother beasts and cattle," enacted as follows:</p> <p>"Be it enacted by the authority of this present parliament, that no person or persons at any time from and after the Feast of the Annunciation of our Lord next coming, shall buy or commence and conclude to buy any manner of oxen, steers, ronts, kine, heffiers or calves, but only in the open fair or market, when the same shall happen to be brought and put to sale, and not sell the same again alive at and in the market or fair where he bought the same, during the time of the said fair or market, upon pain of forfeiture of the double value of such cattle bought or sold contrary to the tenor of this present Act."</p> <p>By clause 2 there was exception in favour of persons buying for their household, farm or dairy; then</p> <p>"And be it further enacted by the authority aforesaid, that no person being a butcher, and using the craft or mystery of butchery, shall at any time after the said feast buy any fat oxen, steers, ronts, kine, heifers, calves or sheep, and sell or cause to be sold the same again alive, upon pain of forfeiture of every such ox, &c., bargained or sold contrary to the form of this present Act."</p> <p>Butchers might buy fat oxen, &c., in open market at their free will, but were not to sell the same again alive (see 1663).</p> <p>By the 3 and 4 Edward VI, cap. 21—"An Act for the buying and selling of Butter and Cheese"—it was enacted, "that no person or persons after the Feast of the Annunciation of our Lady next coming, shall buy or sell again any butter or cheese, unless he or they sell the same again by retail in open shop, fair or market, and not in gross, upon pain of forfeiture of the double value of the same butter and cheese so sold contrary to the tenor of this present Act."</p> <p>2. "Provided alway, that this Act or anything therein contained shall not extend to any innholder or victualer for such butter or cheese as shall be spent or uttered by retail in any of their houses."</p> <p>3. "Provided always . . . that the said word of retail mentioned in this Act shall be expounded, declared, and taken only where a waye of cheese, or a barrel of butter, or of less quantity and not above, shall be sold at any one time to any person or persons in open shop, fair, or market, and that to be done without fraud or covin."</p> <p>This Act was continued by 2 James I, cap. 25, section 3 (1604).</p>
'52	The 5 and 6 Edward VI, cap. 14—"An Acte againste regratours, forestallers, and engrossers," recited, "albeit, divers good statutes heretofore made against forestallers of merchandise and victuals, yet for that good laws and statutes against regratours and engrossers of the same things have not heretofore sufficiently made and provided, and also for that it hath not been perfectly known what person should be taken for a forestaller, regrator, or engrosser, the said

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.

1552

statutes had not taken good effect," wherefore these were severally defined to be—1. Forestallers, persons buying goods or victuals on their way to a market or port; or contracting to buy the same before actually brought for sale; or endeavouring to enhance the price, or prevent the supply. 2. Regrators, persons buying corn, victuals, &c., and reselling them in the same market place, or within 4 miles thereof. 3. Ingrossers, persons buying growing corn, or buying victuals to sell again. But under section 10 persons, might "engross" corn, "not forestalling" it, if at or under certain prices per quarter, viz., wheat 6s. 8d., barley and malt 3s. 4d., oats 2s., pease and beans 4s., rye, &c., 3s. By section 12, inhabitants within one mile of the sea might buy fish fresh and salt to resell. Section 13, drovers might buy cattle, to resell them in markets 40 miles distant; being annually licensed by justices of the peace.

Many of the provisions of this statute were very remarkable, and deserve a more detailed analysis than our space here will allow (*see* 1570).

'55

By 2 and 3 Philip and Mary, cap. 15—"An Act that purueiours shall not take victuals within five miles of Cambridge and Oxford"—the preamble of which is as follows:—

"Humbly sue to your maiesties, the societies, colledges, and companies of your true and faithfull subjects, and daily oratours, the scholers and students of both your maiesties vniuersities, Cambridge and Oxford, that where it hath beene accustomed time out of mind, that both the said market townes of Cambridge and Oxford, wherein the said two vniuersities be set, and the circuit of five miles next adjoyning, hath beene free from any charge or molestation of any common takers, or purueiours for victuall, whereby the said markets were more plentifully serued with victuall, and the poore estate of a great multitude of scholers, hauing very bare and small sustentation, thereby relieued, and now by the meanes that contrary to the same laudable custome, diuers purueiours and takers haue of late excessively frequented the same market, and thereby giuen occasion to make victuals more skant, and much dearer, to a notorious decay of scholers, which also daily in this great dearth is like to increase, and be more lamentable, to the hindrance of God's seruice, the dishonour of the realme, and discomfort of all good and holy men louing learning and uertue.

"II. It may therefore please your Maiesties, of your great pitie and abundant fauor and loue towards your said two vniuersities, being the very two onely nurses of good learning in the realme, with the assent of the Lords spiritual and temporall, &c., &c."

And it is then enacted "that from hencefoorth, no manner of purueiour, taker, lodger, or other minister, may, or shall take or bargain for any kinde of victuall or graine, in any of the said markets or townes of Cambridge, and the citie of Oxford, nor shall take or bargain for any victuall within the compasse of five miles thereto adjoyning, without the consent, agreement or goodwill of the owner or owners, neither shall attempt to carrie, take awaie, or bargain for any manner of graine, or other victuall brought or provided within the said space of five miles, by any common minister of any colledges hostell, or hall, to bee spent within any of the said colledges, hostels, or hals, vpon peine of the forfeiture of the quadruple value of any such maner graine or victuall so taken or bargained for;" and for any such offence should suffer imprisonment "for the space of three moneths, without baile or mainprise." The finding might be by jury empanelled by the "Chancellour, Uicechancellour, or his commissarie for the time being," with two "iustices of the peace of the countie wherein the vniersaries be set."

"III. Provided, that this Act shall not be put in execution at any

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1555	time or times, whensoever your majesties, or the heires or successors of your majestie our Soueraigne Ladie, shall please to come to any or both the said vniuersities, or within seuen miles of either of them, but shall be in suspense during that time onely and no longer.” Nothing in the said Act was to be in any wise “preiudiciall or hurtfull to the maior, bayliffes and communaltie” of the said cities and borough. See Table IX (1757). There was also an enactment made in the parliament of <i>Scotland</i> this year (cap. 35), “Anent the disposition of wyne, salt, ane symmer brocht into the realm.”
'70	By 13 Elizabeth, cap. 21, it was again enacted that purveyors should not take away grain, corn, or victuals, within 5 miles of <i>Cambridge</i> and <i>Oxford</i> . And by 13 Elizabeth, cap. 25—“An Act for reviving and continuance of certain statutes”—it was enacted (sec. 21) “that the Act 5 and 6 Edward VI, cap. 15, was not meant to extend, nor should extend to any wines, oils, sugars, spices, currans, nor other foreign victuals, brought or to be brought into this realm from beyond the seas; fish and salt only excepted.”
'79	There was an Act of the parliament of <i>Scotland</i> (cap. 26), “For punishment of regrataris and forstallaris.”
'89	By the 31 Elizabeth, cap. 5—“An Act concerning informers”—it was enacted that for any offence comprised in any statute made or to be made against engrossing, regrating, or forestalling, where the penalty should appear to be of the value of 2 <i>ol.</i> and above, every such offence might be laid in any county at the will of the informer.
'92	There was an Act of the parliament of <i>Scotland</i> (cap. 70) intituled, “Aganis foirstallers and regraittaris.”
1608	“The king, on account of the high prices of corn, issues out good orders against monopolists, who bought up and engrossed grain of every species.”—SIR CHARLES WHITWORTH.
'23	Regarding the change of policy in <i>now</i> allowing grain to be purchased and sold again either in the markets of the kingdom or elsewhere, see 21 James I, cap. 28, sec. 3, already quoted in some detail in Table X. See also 1663.
'61	There was an Act of the parliament of <i>Scotland</i> (cap. 280), intituled “An Act protecting of manufactories,” which was directed against forestallers.
'63	The 15 Car. II, cap. 8—“An Act to prevent the selling of live fatt Catle by butchers”—after reciting of the Act of 1549, proceeds:— “. . . Which law hath not wrought such effectuall reformatiōs as was intended by reason of the difficultie in the proof of such buying and selling, being for the most part at places far distant if not in severall countyes, by meanes whereof the parties soe offending have escaped unpunished. Be it therefore enacted, &c., That noe person using the trade of a butcher shall at any time from and after the Feast of St. Michaell the Arch Angell next ensuing, sell, offer, or expose to sale in any market or elsewhere, either by himselfe or any servant or agent whatsoever, any fatt oxen, steers, runts, kine, heifers, calves, sheepe or lambes alive, upon paine to forfeite the double value of the cattel soe sold, or offered or exposed for sale as aforesaid.” See further 1670-71.
'70-71	By 22 and 23 Car. II, cap. 19, “An Act to prevent fraudes in the buying of and selling of cattell in Smithfeild and elsewhere,” the Acts of 1549 and 1663 were revived and continued, with the following addition:— “And bee it further enacted by the authority aforesaid, That noe jobber, salesman, or other broker or factor, which doe or shall cunningly buy or sell cattell for others be allowed or employed

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.		
1670-71		either for buying or selling any fatt cattell other than swine or calves by or for any butcher, or other person or persons whatsoever, within fowerscore males of the cities of London and Westminster, upon paine of the forfeiture of the value of the said cattell soe bought or sold for him or them as aforesaid, to be paid by the owner of the said cattell. And upon further paine, that all and every person and persons taking upon him or them to use or exercise the said employment of a jobber or broker, or of a salesman or factor for the buying or selling of cattell contrary to this present Act, shall forfeite for every such offence the value of all such cattell soe bought or sold or exposed to sale by him or them as aforesaid.
		“And be it further enacted, that if any person or persons exercising the trade of a butcher within the cities of London or Westminster, or within 10 miles thereof, shall buy any fatt cattell and sell the same againe either alive or dead to any person or persons exercising or using the same trade, that the seller thereof shall forfeite for every such offence the value of such cattell soe bought and sold as aforesaid.”
		This clause was repealed in 1672, by Car. II, cap. 4.
1703	....	By an Act of the parliament of <i>Ireland</i> , 2 Anne, cap. 15—“An Act to prohibit butchers from being graziers, and to redress several abuses in buying and selling of cattle, &c.”—it is recited, “Whereas great inconveniences happen in this kingdom by butchers following the trade or occupation of graziers, and by their engrossing cattle into their hands to sell again to other butchers, and by buying of cattle in fairs and markets, and selling them again in the same fair and market.” For remedy whereof it was enacted that no butcher should be a grazier, or keep in his possession or in trust for him above 20 acres for cattle, and that no butcher in Dublin, or within 5 miles, should sell fat oxen, &c., to any other butcher, either dead or alive, nor expose any alive for sale within 20 miles of where bought, no cattle or sheep bought in any market or fair to be sold or exposed for sale in the same place the same day. See 1710.
'06	....	The 5 Anne, cap. 34—“An Act for continuing the laws therein mentioned, relating to the poor, and to the buying and selling of cattle in Smithfield and for suppressing piracy”—contained the following :— “And whereas there is, notwithstanding the provisions of the aforesaid Act a pernicious practice, now in use, for one butcher to buy a greater quantity of fat cattle or sheep than he can vend, unless by selling them again to other butchers, which reduces the number of buyers in <i>Smithfield</i> , and may be a very great inconvenience both to the graziers and housekeepers, by subjecting both the one and the other to such price as they shall think fit to give or demand, be it therefore enacted by the authority aforesaid, that from and after the 29th September, 1707, no person using the trade of a butcher shall sell, or offer for sale, in any market or elsewhere, either by himself or any servant or agent whatsoever, within the cities of London and Westminster, or within 10 miles thereof, to any person or persons exercising or using the trade of a butcher, any fat cattle or sheep, either alive or dead, upon pain to forfeit the value of the cattle or of each sheep so sold or offered to sale as aforesaid.”
'08	....	This Act is explained by 7 Anne, cap. 6, to the effect that one butcher might sell to another any <i>dead</i> calves, sheep, or lambs.
'10	....	By an Act of the parliament of <i>Ireland</i> , 9 Anne, cap. 7, the Act of 1703—“which Act by experience hath been found to be in most parts of it a good and profitable law in the kingdom”—was continued and made perpetual (see 1741 and 1757).
'41	....	By an enactment of the parliament of <i>Ireland</i> , 15 George II, cap. 9, the Act of 1703 was amended after the following recital: “And whereas divers evil-minded persons exercising the trade of a butcher do buy

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.		
1741	....	and engross into their hands upon the roads leading to the city of Dublin, and in the markets thereof, greater numbers of the best oxen, sheep, steers, cows, calves, lambs, and swine, than they can sell by retail to the inhabitants of the said city at their shops or stalls, and with intent to sell the carcasses and joints of such oxen, sheep, steers, cows, calves, lambs, and swine to other persons using or exercising the same trade or mystery of a butcher, to be sold again in the markets of the said city and liberties adjoining, whereby considerable gain doth arise to themselves, the best of meat is ingrossed into few hands, the price of victuals greatly enhanced, and the true intent of the said former Act is eluded." It was therefore enacted that no butcher in Dublin or within 5 miles should sell a carcass or any kind of beef, &c., to a butcher in the market, nor expose the same for sale not having bought and had the oxen, &c., in their possession alive. Penalty (<i>inter alia</i>), public whipping three market days through the district where such offence had been committed.
'49	....	By the 22 George III, cap. 49—"An Act for making a fish market for the sale of Fish in the city of <i>Westminster</i> , and for preventing the forestalling and monopolising of Fish, and for allowing the sale of Fish under the dimensions mentioned in a clause contained in an Act of the first year of his late Majesty's reign, in case the same are taken with a hook"—it is recited: "Whereas a free and open market for fish in the city of <i>Westminster</i> would greatly tend to increase the number of fishermen, and improve and encourage the fishery of this kingdom;" and the right to establish such a market is enacted in a measure of twenty-one clauses. Those relating to forestalling are as follows (section 9): "All contracts between fishermen and fishmongers made before 29th September, 1749, are declared void, except (section 11) as to fresh salmon, soles, oysters, and salt and dried fish," which were to subsist. "XII. And lest fishermen and other persons employed in catching, importing, or vending of fish, should bring fish to <i>Queenborough</i> , <i>Gravesend</i> , or some other place or places in the river <i>Thames</i> , and there keep it for a considerable time, and send only small quantities from time to time to market, with a view to keep up the price of the several species of fish, which such person or persons respectively import or trade in, which practice will not only tend to enhance the value [? price] of fish, but also to render it unwholesome food to the consumer, as well as the fishery in general." Wherefore a penalty was enacted against fishermen not selling their fish within eight days after their arrival on the coast between <i>Yarmouth</i> and <i>Dover</i> .
'56	....	By 39 George II, cap. 39, the Act of 1749 is explained, amended, and made more effectual, and it is herein recited . . . "And whereas many difficulties have arose (<i>sic</i>) in putting the said Act in execution."
'57	....	There was an enactment of the Irish parliament, 31 George II, cap. 8—"An Act to prohibit salesmen from being graziers, and to redress several abuses in buying and selling cattle or meat," which was in fact a re-enactment in another form of the Act of 1703, after an admission in the recital that the last-named Act had "not answered the good end for which it was intended," it is then further enacted that no butcher in Dublin or other person for his use, should buy or contract for calves or lambs in the county or roads to Dublin; calves and lambs to be retailed in meat markets should be sold openly at times appointed. The English House of Commons after an inquiry into the distress prevailing among the poor, recommended the enforcement of the laws against forestallers and regrators.
'61	....	There was enacted the 2 George III, cap. 15—"An Act for the better supply of the cities of <i>London</i> and <i>Westminster</i> with fish, and to

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.

1761

reduce the present exorbitant price thereof, and to protect and encourage fishermen." The scheme of this Act was to allow any person, though not a fishmonger, to buy at any market, sea coast or river, &c., any fish in season and sizeable, paying the accustomed dues at the place of purchase, and to sell the same again in any fish or flesh market, paying the accustomed dues, Covent Garden Market, and the precincts thereof excepted. But such fish were not to be resold by the first purchaser before the same were brought to London or Westminster, or to where consigned, under a penalty of 20*l.* Special waggons, designed "fish machines," were to be employed in the carriage of such fish, without being liable to the duty on common stage waggons. They were to pay only the same tolls as post chaises, and might run with narrow wheels; they might travel on Sundays and holidays. If the driver should suffer any passenger, game, or other thing than fish to be carried he should be fined 40*s.* Bulk not to be broken before exposed for sale in the market, or 10*l.* penalty. It was to be exposed for sale the next morning after arrival in London (except Sundays), and the selling any part by retail before it reached the market incurred a fine of 10*l.* Mackerel brought up by such carriages might be sold on Sundays.

All contracts made for fish, except salmon or lobsters, were to be vacated after 1st May, 1762, and parties discharged from the penalties to their contracts, and parties contracting to buy up fish after that date (except salmon and lobsters) before the same should be exposed in the market, to be liable for penalty of 50*l.*, and contract declared void. After 1st May, 1762, no contract for salmon and lobster to extend beyond one year, and after same date no person might be engaged to buy fish in the markets of *London* or *Westminster*, to divide among fishmongers, and no person to buy fish but for his own sale or use, under penalty of 20*l.* No person to refuse to sell to particular persons, under penalty of 20*l.* And all fish of respective sorts specified in the Act brought into the London markets for sale, should be openly sold at first hand, and in no greater quantity in a lot than is prescribed; and every lot to consist of one kind of fish only. *No fish to be sold or exposed for sale again in the market wherein it was bought during the same day, under penalty of 10*l.** An account of the quantities and sorts of each fish brought to market to be posted in legible characters on the fish stand, "flounders, plaice, and dabbs excepted;" penalty for defacing such account before sale concluded, 40*s.* No fisherman to destroy any fish (not being unwholesome) after market over; penalty not exceeding two months' hard labour. Fishermen engaged in this business to be exempted from impressment into the king's service. Any parties concerned in contracts contrary to this Act giving first information and convicting others, to be himself indemnified, and entitled to moiety of penalty.

This specimen of free trade legislation in fish contains in the whole thirty-seven sections, and is one of the most penal measures in the statute book. I well remember these fish machines running daily from Yarmouth to London up to the date of the opening of the Great Eastern Railway.

'64

A parliamentary committee was this year appointed to inquire into the high price of provisions. In its report the committee quote the evidence of several prominent salesmen and butchers that the high prices were not exclusively the effect of "natural causes;" and then occurs the following passage:—

"In support of this opinion, they informed the committee of a method now practised of buying large quantities of sheep and oxen upon the road to market, in order to forestall the market of that day, and fix the price by the will of a few engrossers; of another species

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1764	<p>of forestallers, who buy great numbers of sheep and oxen, and, after slaughter, sell the carcasses whole to the lesser butchers, and thereby set the market price to them, and advance the retail price; and all the witnesses concurred in declaring that if these combinations and arts for gaining and keeping the command of the markets in a few hands could be obviated and prevented, the summer and winter price of meat of all sorts would be more reasonable.</p> <p>“They were clearly of opinion that at this very time there is no want of fat cattle, and they urged with great force, in support of that judgment, that through the whole month of <i>March</i>, when provisions have been so very dear at <i>London</i>, beef, mutton, and veal, have been at a moderate and usual price in the markets of the several counties within 30 miles around the metropolis.”</p> <p>Upon the whole matter the committee came to the following conclusion:—</p> <p>“Resolved, that in the opinion of this committee the high price of provisions of late, has been occasioned partly by circumstances peculiar to the season, and the year, and partly by defect of the laws in force for convicting and punishing all persons concerned in forestalling cattle in their passage to market.”</p>
'72	<p>A change came over the scene. There was enacted the 12 George III, cap. 71—“An Act for repealing several laws therein mentioned against badgers, engrossers, forestallers, and regrators, and for indemnifying persons against prosecutions for offences committed against the said Acts”—which contains this very candid recital:</p> <p>“Whereas it hath been found by experience that the restraints laid by several statutes upon the dealing in corn, wheat, flour, cattle and sundry other sorts of victuals, by preventing a free trade in the said commodities, have a tendency to discourage the growth, and to enhance the price of the same; which statutes, if put in execution, would bring a great distress upon the inhabitants of many parts of London and Westminster.”</p> <p>It was therefore enacted that the above recited Acts of 1549, 1555, 1579, 1663, and 1706, as also “all Acts made for the better enforcement of the same, being detrimental to the supply of the labouring and manufacturing poor of this kingdom, shall be, and the same are hereby declared to be repealed.”</p> <p>And all informations, &c., commenced under the said Acts were to cease and determine.</p>
'73-74	<p>By an enactment of the parliament of <i>Ireland</i>, 13 and 14 George III, cap. 22—“An Act for paving streets within the city and county of the city of Dublin”—section 73 authorises a market jury to seize provisions or victuals in the hands of any forestaller, regrator, or engrosser.</p>
'87	<p>By an enactment of the parliament of <i>Ireland</i>, 27 George III, cap. 46 —“An Act for establishing market juries in cities”—section 3 authorises and empowers certain market juries to seize provisions and victuals found in the hands of forestallers, regrators, and engrossers.</p>
1800	<p>A corn dealer named Rusby was this year found guilty of having purchased by sample in the corn market in Mark Lane, 90 quarters of wheat at 41s. per quarter, and having sold 50 of them in the same market, the same day, for 44s., Lord Chief Justice Kenyon in sentencing him, said to the jury, “You have conferred, by your verdict, almost the greatest benefit of your country that was ever conferred by any jury.” It would have been difficult after this to obtain a conviction against any of the persons who had gutted this ill-used man’s residence in Blackfriars Road. No punishment was inflicted, as some of the judges doubted whether regrating were really punishable at common law. See Table XV, this date.</p> <p>Again, on 13th July, two butchers were tried at Hicks’s Hall on an</p>

TABLE XII.—*Speculation in Grain and Other Articles—Contd.*

A.D.	
1800	indictment for forestalling, by buying cattle on the road to Smithfield Market, when it was stated that the practice was a common one. Being found guilty, defendants were ordered to pay 20 <i>l.</i> each, or be imprisoned for three months. This was considered a light punishment, and would have been more severe had not the defendants been "the first examples since these sort of prosecutions fell into disuse."
1800	There was published, <i>A Short Inquiry into the Nature of Monopoly and Forestalling</i> . By Edward Morris, Esq. Third Edition, with additions. London, 8vo.
1800	Also, <i>An Address to the Good Sense and Candour of the People in behalf of the Dealers in Corn</i> , with observations on a late Trial for Regrating. By Sir Thomas Turton, Bart. London, 8vo.
1800	Observations on the pernicious consequences of Forestalling, Regrating, and Ingrossing; with a List of the Statutes, &c., which have been adopted for the Punishment of those Offences, and Proposals for New Laws to Abolish the System of Monopoly; Remarks on the Impolicy of the Consolidation of Small Farms, &c. By J. S. Girdler, Esq., London. 8vo. 6 <i>s.</i>
'44	There was enacted 7 and 8 Victoria, cap. 34—"An Act for abolishing the offences of forestalling, regrating and engrossing, and for repealing certain statutes passed in restraint of trade"—which recited: <p>"Whereas divers statutes have been from time to time made in the parliaments of <i>England, Scotland, Great Britain and Ireland</i> respectively, prohibiting certain dealings in wares, victuals, merchandise, and various commodities of the names of <i>badgering, forestalling, regrating and engrossing</i>, and subjecting to divers punishments, penalties and forfeitures, persons so dealing; and whereas it is expedient that such statutes, as well as certain other statutes made in hindrance and in restraint of trade, be repealed . . . and whereas, notwithstanding the making of the first recited Act [12 George, cap. 71 (1772)], <i>persons are still liable to be prosecuted for badgering, engrossing, forestalling, and regrating, as being offences at common law</i>, and also forbidden by divers statutes made before the earliest of the statutes thereby repealed."</p> <p>It was therefore enacted that after the passing of this Act the several offences named "be utterly taken away and abolished, and that no information, indictment, bail, or prosecution shall be either at common law, or by virtue of any statute, or be commenced or prosecuted against any person for or by reason of any of the said offences or supposed offences." This Act extended specifically to <i>Scotland and Ireland</i>.</p>

Note.—"Besides attempting to lower prices by prohibiting exportation, our ancestors attempted to lower them by proscribing the trade carried on by corn dealers. This most useful class of persons were looked upon with suspicion by every one. The agriculturists concluded that they would be able to sell their produce at higher prices to the consumers were the corn dealers out of the way; while the consumers concluded that the profits of the dealers were made at their expense; and ascribed the dearths that were then very prevalent entirely to the practices of the dealers, or their buying up corn and withholding it from market."—McCulloch, *Literature of Political Economy*.

XII.—*Misapplication of Grain.*

It was but natural that when grain products were scarce, and the people starving, that attention should be drawn to any process or processes whereby the supply, or any material proportion of it was being absorbed. Hence the measures indicated in the following table fall into the natural order of things, and demand no special comment.

It would be interesting to note the proportion of the grain produce which at different periods of our history have been applied to these purposes; but the statistics upon the point are limited.

In 1765, Mr. Charles Smith, author of “Tracts on the Corn Trade,” made many curious investigations, with a view to discover the mean annual consumption of corn; and reducing it to the standard of wheat, he found it to be at the rate of *about a quarter for each individual*, young and old. He took the population of England and Wales for this year to be 6,000,000, and reckoned the consumers of each kind of grain, the quantity consumed by each individual, and hence the whole consumed by man, as follows:—

Population.	Consumers of	Average Consumption per Head.	Consumed by Man.
3,750,000	Wheat at	1 qr. each	3,750,000 qrs.
739,000	Barley „	$1\frac{3}{8}$ „	1,016,125 „
888,000	Rye „	$1\frac{1}{8}$ „	999,000 „
623,000	Oats „	$2\frac{7}{8}$ „	1,791,225 „
Consumed by man			7,556,350
In addition to this Mr. Smith exhibited the Wheat distilled, } made into Starch, &c.			90,000 qrs.
Barley used in Malting, &c.....			3,417,000 „
Rye for Hogs, &c.....			31,000 „
Oats for Horses, &c.....			2,461,500 „
Total of home consumption.....			13,555,850
Add excess of exports over imports			398,924
Add seed (one-tenth)			13,954,474 1,395,447
Total growth of all kinds of grain in England and Wales } in 1765			15,349,921

This estimate did not include either Scotland or Ireland, and later inquiries have rendered it probable that the population was under-estimated by nearly one million. It seems also that at that date the proportion for seed ought to have been *one-sixth*, certainly not less than *one-seventh*.

Regarding the estimated consumption per head, this estimate has been confirmed by a variety of subsequent researches in various parts of England and in France. In this latter country the consumption was found to be about ten bushels per head ; but the French consume more bread and less animal food than the English.

In 1814 Dr. Colquhoun made the following estimate of the consumption of grain in the United Kingdom, *i.e.*, England, Scotland and Ireland :—

Species of Grain.	Consumed by Man.	Consumed by Animals.	Used in Beer and Spirits.	Used in Various Manufactures.	Total Quarters.
	Qrs.	Qrs.	Qrs.	Qrs.	
Wheat.....	9,000,000	....	....	170,000	9,170,000
Barley.....	1,875,000	210,000	4,250,000	....	6,335,000
Oats.....	6,750,000	10,200,000	....	....	16,950,000
Rye.....	625,000	59,000	....	1,000	685,000
Beans and Peas	500,000	1,360,000	....	....	1,860,000
Total	18,750,000	11,829,000	4,250,000	171,000	35,000,000

I am not aware of any complete estimate of this character of later date ; but the amount of barley made into malt had increased from 4,525,681 quarters in 1825 to 7,876,959 quarters in 1875.

Under this head falls to be named those wanton acts of waste, such as burning grain-stores, firing ricks, and other acts of wilful destruction of grain which have too often occurred during periods of scarcity, and the only effect of which must be to add to the calamities of the moment. The incendiary fires which took place in Kent and in Suffolk in 1830, and in Cambridgeshire in 1853-54, are happily about the latest instances of such folly.

TABLE XIII.—*Misapplication of Grain by its Excessive Use in Brewing, Distilling, or by Misadventure.*

A.D.	
1250 ...	The art of distillation of spirits from grain became known in England about this date (reign of Henry III); it having been introduced into Europe by the Moors about a century previously.
1302 ...	The failure of the English wine crop in 1298 led to a considerable increase in the brewing of ale, which became the subject of complaint, as affecting the price of grain.
'15 ...	"The Londoners the same yeare, considering the wheat was much consumed by the converting thereof into mault, ordained that from thenceforth it should be made of other graine; and also that a gallon of the better ale should be sold for 3 halfe pence, and of small ale for one penny, not above." This order was afterwards extended by the king through the whole kingdom.—PENKETHMAN.
1532 ...	By 24 Henry VIII, cap. 10—"An Acte made and ordeyned to destroye choughes, crowes, and rookes"—it is recited:— <p>"Forasmuch as innumerable number of rooks, crows, and choughs, do daily breed and increase throughout this realm, which rooks, crows, and choughs do daily destroy, devour, and consume a wonderful and marvellous great quantity of corn and grain of all kinds, that is to wit, as well in the sowing of the same corn and grain, as also of the ripening and kernelling of the same, and over that a marvellous destruction and decay of the covertories of thatched houses, barns, reeks, stacks, and other such like. (2) So that if the said crows, rooks, and choughs should be suffered to breed and continue, as they have been in certain years past, they will undoubtedly be the cause of the great destruction and consumption of a great part of the corn and grain which hereafter shall be sown throughout this realm, to the great prejudice, danger, and undoing of a great number of all the tillers, husbands, and sowers of the earth within the same."</p> <p>It was therefore enacted that all persons in the possession of lands should do their best to destroy crows, &c. Every town, hamlet, &c., was to provide and maintain crow nets during ten years, during which period farmers, &c., to meet and take orders for destroying young crows, &c. The takers of old crows, &c., were to be rewarded at 2d. per dozen.</p>
1630 ...	In a letter from the lords of the council, dated "from Whitehall, the xiii of June, 1630," and addressed to "the maior and burgesses of the cittie of Wells," in view of an expected famine, there is the following passage:— <p>"That the lawes provided as well againste the breweinge or spendinge of strong ale or beere in inns or alehouses be strictly put in execution, as likewise against ingrossers, forstallers of corne, and for the regulatinge of the market for the prices of grayne; and that you cause the grayneries of those to be visited or noted for ingrossers, to see that they may supply marketts accordinge to the lawes—and generally that you will vse all other fitt courses and remedies, either provided by lawe, or w^{ch} you by y^{or} experience knowe best, or can finde out for the preservacon and well-husbandinge of the grayne within y^{or} jurisdiction."</p>
'46 ...	At this period it seems that the usual bread-corn of the poor was barley. The king (Charles I) availed himself of this circumstance, in order to establish a new monopoly, by subjecting the brewers and maltsters to a royal license. His reasons for this measure were declared to be, for the <i>relief of the poorer sort of his people whose usual bread was barley</i> ; and for the restraining of innkeepers and victuallers, who made their ale and beer <i>too strong and heady</i> . Rym. Fæd., xix, 102; xx, 157.
1701 ...	By 9 Anne, cap. 14—"An Act for encouraging the consumption of malted corn, and for the better preventing the running of French and foreign brandy"—it was recited:—

TABLE XIII.—*Misapplication of Grain—Contd.*

A.D.

1701

"Whereas the making of *English* brandy and strong waters from malted corn, hath been encouraged by several Acts of parliament, whereby great quantities of the worst sort of malted corn, not useful to the brewers, hath been yearly consumed by those who set up works for that purpose: and whereas the consumption of *English* brandy and strong waters, hath of late years been greatly hindered, as well by the running of *French* and other foreign brandies, as also by a clause in an Act made in the twelfth and thirteenth years of his late majesty . . . whereby all distillers and tradesmen who sell brandy and strong waters by retail, are compelled to take out licenses, as common alehouse keepers."

It was therefore enacted that all French brandy landed before the duty was paid should be forfeited.

'09 See (8 Anne, cap. 2) Table X, this date.

'57 There was enacted, 30 George II, cap. 10—"An Act to prohibit for a limited time the making of low wines and spirits from wheat, barley, malt, or any other sort of grain, or from any meal or flour"—and such distillation was accordingly prohibited for two months.

Same session there was enacted 30 George II, cap. 15—"An Act for continuing an Act of the present session of parliament entitled, &c. [the preceding Act], and the Act was extended to 11th December this year, with a proviso empowering his majesty by proclamation, or order of council, to suspend the Act and permit distillation from wheat, &c.

'58 There was enacted 32 George II, cap. 2—"An Act to continue . . . and also to continue for a farther time the prohibition of the making of low wines and spirits from wheat, barley, malt, or any other sorts of grain, or from meal or flour; and to prohibit for a limited time the making of low wines and spirits from bran." The Act of 1757 to remain in force until 24th December, 1759.

'59 There were enacted two measures of restriction this year:—

1. The 33 George II, cap. 4, "An Act to continue for a further time the prohibition of the making of low wines and spirits from wheat, barley, malt, or any other sort of grain, or from meal, flour or bran." The Act of 1757 was continued to 24th December, 1760, unless the continuation thereof be shortened by any other Act of this session.

2. The 33 George II, cap. 9, "An Act for preventing the excessive use of spirituous liquors, by laying additional duties thereon, for *shortening the prohibition of making low wines and spirits from wheat, barley, malt and other grain, and from meal, flour and bran*; and for encouraging the *exportation* of British made spirits; and for more effectually securing the duties payable upon spirits, and preventing the fraudulent relanding and importation thereof;" from the preamble of which it appears that an unexpected good had resulted from the famine necessities of the original measure, thus:—

"Whereas the high price of spirituous liquors hath been a principal cause of the diminution of the home consumption thereof, and hath thereby greatly contributed to the health, sobriety and industry of the common people: and whereas it is therefore of the utmost importance to the public welfare, that some timely provision should be made for preventing the return of all those mischiefs which must unavoidably ensue, in case such spirituous liquors should again be suffered to be sold at as low a rate as formerly; and forasmuch as the most effectual and expedient method of continuing the high price of spirituous liquors, will be by laying a large additional duty on such spirituous liquors," &c.

This is as neat an excuse for raising the revenue as is often to be found. Additional duties were laid as from 21st April, 1760. The prohibition against extracting spirits from the grain mentioned was

TABLE XIII.—*Misapplication of Grain—Contd.*

A.D.	
1759	withdrawn from same date, unless during the recess of parliament the price of wheat should exceed for two successive market days 48s. per quarter in the port of London, in which case the king might by proclamation continue the prohibition.
'68	By 8 George III, cap. 1, "An Act to amend an Act made in the last session of parliament, to prohibit for a limited time the exportation of corn ; and also the extraction of low wines and spirits from wheat and wheat flour."
'69	By 9 George III, cap. 1, "An Act to prohibit for a further time the exportation of corn ; and also the extraction of low wines and spirits from wheat and wheat flour."
'70	By 10 George III, cap. 1, The prohibition was extended to twenty days after the commencement of the next session.
'71	By 11 George III, cap. 1, The like prohibition again extended to twenty days after commencement of the next session.
'73	By 13 George III, cap. 3, The like prohibition again extended to 1st January, 1774.
'95	There was enacted, 35 George III, cap. 11—"An Act for granting to his Majesty additional duties of excise on worts, wash, and other liquors, made in England, for extracting spirits for home consumption ; and for preventing distillers from making use of wheat or wheat flour in making wash for extracting spirits."
'96	By the 36 George III, cap. 7, it was permitted that certain wheat, wheat flour, and meal, which had been imported under the provisions of 31 George III, cap. 3, "and which had not been found fit for making bread" might be used (<i>inter alia</i>) in the distillation of low wines and spirits.
1800	There was enacted— <ol style="list-style-type: none"> 1. The 39 and 40 George III, cap. 7—"An Act to prohibit, until the 1st day of March, 1800, the making of low wines or spirits from wheat, barley, malt, or other sort of grain, or from any meal, flour, or any bran, in that part of Great Britain called <i>Scotland</i>." 2. The 39 and 40 George III, cap. 8, "An Act for reducing until the 1st day of June, 1800, the duties upon spirits distilled from molasses and sugar, or any mixture therewith ; for prohibiting the distillation of spirits from wheat flour ; and for reducing until the 20th day of September, 1800, and better collecting the duties payable on the importation of starch." 3. The 32 and 40 George III, cap. 25, "An Act to prohibit, until the 1st day of October, 1800, the use of wheat in making starch." This extension of prohibition to starch was a new feature. 4. The 39 and 40 George III, cap. 62, "An Act to allow for nine months after the passing this Act, the use of sugar in the brewing of beer." In the autumn session of the same year there were enacted other measures, viz. :— <ol style="list-style-type: none"> 1. The 41 George III, cap. 3, "An Act to prohibit until the 1st day of January, 1802, the use of corn in distilling of spirits and making of starch." 2. The 41 George III, cap. 6, "An Act for continuing until the expiration of forty days after the commencement of the first session of parliament that shall be begun and holden after the 1st day of September, 1801, several laws relating to the allowing the use of sugar in the brewing of beer and to the prohibiting the making of low wines or spirits from wheat and certain other articles, in that part of Great Britain called <i>Scotland</i>." 3. The 41 George III, cap. 6—"An Act for shortening, until the 25th day of March, 1801, the time of keeping in steep for malting barley damaged by rain in the last harvest."
01	There was enacted 42 George III, cap. 5, "An Act to continue until the

TABLE XIII.—*Misapplication of Grain—Contd.*

A.D.	
1801	<p>1st day of January, 1802, so much of an Act made in the thirty-ninth and fortieth years of the reign of his present majesty as relates to the reducing the duties upon worts or wash brewed or made from molasses or sugar, or any mixture therewith, or to any distiller or distillers, or maker or makers of spirits; for reviving and continuing for the same period so much of the said Act as relates to the reducing and better collecting the duties payable on the importation of starch, and for continuing for the same period an Act made in the same session of parliament for prohibiting the making of low wines or spirits from wheat, barley, malt, or other sort of grain, or from any meal, flour, or grain in <i>Scotland</i>; and so much of an Act made in the last session of parliament as relates to allowing the distillation of spirits in <i>Scotland</i> from molasses or sugar at a lower rate of duty."</p> <p>And same session there was enacted the 41 George III, cap. 16 (United Kingdom), "An Act to prohibit, until the 25th day of March, 1802, the making of malt and the distilling of spirits from corn or grain in <i>Ireland</i>."</p>
'02	<p>There was enacted—</p> <p>1. The 42 George III, cap. 5, "An Act to continue until the 1st day of January, 1802, so much of an Act made in the thirty-ninth and fortieth years of the reign of his present majesty, as relates to the reducing the duties upon worts or wash brewed or made from molasses or sugar, or any mixture therewith, or to any distiller or distillers, or maker or makers of spirits; for revising and continuing for the same period so much of the said Act as relates to the reducing and better collecting the duties payable on the importation of starch; and for continuing for the same period an Act made in the same session of parliament for prohibiting the making of low wines or spirits from wheat, barley, malt, or other sort of grain, or from any meal, flour or bran in <i>Scotland</i>; and so much of an Act made in the last session of parliament as relates to the allowing the distillation of spirits in <i>Scotland</i> from molasses or sugar at a lower rate of duty." The title tells its own tale without reference to the Act itself.</p> <p>2. The 42 George III, cap. 14, "An Act to permit until the 1st day of July, 1802, the making of starch from rice or potatoes, or any mixture thereof, and the importation of any such starch from <i>Ireland</i> free of duty."</p>
'08	<p>An Inquiry into the Policy and Justice of the Prohibition of the use of Grain in the Distilleries. By Archibald Bell, Esq. Edinburgh. 8vo. "An able pamphlet, strongly opposed to prohibition."—McCulloch.</p>

General Remarks upon the preceding Tables.

In the preceding Tables (VIII to XIII inclusive), and the observations accompanying them, is presented an outline of the causes, distinguished in this paper as the "ARTIFICIAL CAUSES," of famines. And as to several of these, this enigma presents itself, that the very remedies which have been adopted to prevent, or to mitigate the severity of, these periodical visitations, have by some reflex action, apparently, either aided in producing them, or at least added very much to the severity of the results flowing from them. Famine is the result of a scarcity of the food necessary for the sustenance of a community. It is clear that the actual occasion of such scarcity may be either of several sets of circumstances

acting singly or combined. 1. It may be from a failure of crops, from war, pestilence, neglect, or from the density of population being so great that the area at disposal for cultivation is insufficient for the requirements of the numbers depending on it. 2. It may result from the circumstances that while there is food sufficient in the country, it is still too far removed from the location of those requiring it, and there may be no efficient means of transport to bring the food to the people.* 3. It may result from a want of means to purchase food, which with such means could be obtained in abundance. But it was not the plan of this paper to deal with theoretical causes, or even to group the causes under any very scientific arrangement. The inquiry took for its basis actual facts. There had been many hundreds of famines in our own country and in others. These had been recorded as to time, location, and reported cause. I sought out those records, reduced them to chronological order, and made a summary of their reported causes, twelve in number. The five "Natural Causes," *i.e.*, causes beyond human control, have been examined in Part I. The so-called artificial causes were left for like treatment on this occasion; and these I have had to deal with here in the order in which they were presented by the original investigation.

It became apparent in the first portion of the paper that the investigation was of a very complex character; that the elements which went to make up the aggregate of the reputed causes of famine were diverse in the extreme. But this was no argument against the proposed investigation; it was in truth very much the other way. Problems with obvious, or very simple, conclusions, stand much less in need of elucidation than those wherein the considerations are multifold. If I had foreseen the labour involved in the task I had set myself, that would have been a very good reason for leaving it in the hands of some person having fewer demands upon his time than myself. But having once entered upon it, there has been no course open to me but to pursue it, and to endeavour to do this thoroughly. I might have shirked certain stages of the inquiry on the simple ground of the labour involved; but the mere question of labour, where historical truths, or statistical results, are in view, is not to be allowed to have weight; I have therefore followed it through to the end, leaving no stone unturned to make the inquiry reasonably complete.

To determine the mode of treatment best adapted to the inquiry has caused me no small degree of anxiety. To make each

* On various occasions when the Thames has been frozen over for several weeks, the price of provisions in the metropolis has been greatly enhanced: although there was no scarcity whatever in the country. It was solely a question of transit. See Table IX (1767).

branch of investigation reasonably complete in itself, and yet in harmony of treatment with the whole, has been the object in view. That the method I have pursued is the best that could have been devised I am very far from contending; it is simply, on the whole, the best which has presented itself to my mind.*

I here desire to refer to an objection which has been made to the first part of the paper, and to which perhaps the present portion is equally or even more open. It is said the facts presented are facts in history, and are not statistical in the sense ordinarily understood. I admit there is some force in the objection; but I reply, *these are the bases of statistical inquiry; historical facts reduced to the form and order of statistical tables.* No surmises or generalisations, which may mean something or nothing, as they are rendered or understood; here you have the very words of the record, the time and place and mode of recording. The many hundreds of Acts of parliament embodied in the tables here given have been carefully read and condensed from the "Statutes of the Realm" and the "Statutes at large," and in order to make the understanding of their legislative clauses more clear, I have, wherever it appeared desirable, quoted the very reasons assigned by the legislature for the particular enactment. Let me further say, while on my defence, that not one Act of parliament, nor one book, tract, or record of any kind, has been quoted which does not in my judgment bear directly upon the question of famines, or which has not been designed to do so.

Acts of parliament are not light reading; and the language employed in them is not always redundant either with grace or clearness. The rules of grammar are not to be flaunted in the face of the assembled legislature. The title of an Act is frequently the only part of it which commends itself to the ordinary understanding; but even the titles do not always convey a very conclusive indication of the contents. In a word, the study of the results of legislative deliberation does not inspire one with the highest ideal of legislative wisdom!

I have said that the anomaly presents itself in respect of several of the tables here given, that while the measures they recount were intended to avert the occurrence of famines, there is reason to believe that they have frequently had the very opposite effect. This is particularly the case as to the legislative enactments in Tables IX, X, XI, and XII. Instances of more perverted

* For my own information I have made a chronological table of all the events and incidents contained in the entire fifteen tables embraced in this paper and the former one. It perhaps shows the logical sequence of events more fully than they are here shown; but I doubt if that form would have been so suitable to the pages of our *Journal*, or the information conveyed so useful to general readers, outside the subject of Famines.

ingenuity than are to be met with in these legislative efforts it is not possible to conceive. An ukase to compel water to run up hill would have been as reasonable, and in many cases, not, in effect, very dissimilar; while the tradition of the Pope's bull against the new moon has at least the advantage of humour in the comparison!

And here I pass from my legislative review.

Supplemental Observations.

It has become clear in the progress of this inquiry that the twelve causes of famines indicated in the original table in Part I, do not cover the entire considerations which belong to the history of famines. Accordingly I propose to add a few remarks upon points of direct interest, viz., 1. The prevention of famines in the future; 2. On the mortality occasioned by famines; 3. A table (No. XIV) of the price of wheat in England from the year A.D. 1000 down to the present time; 4. And finally a table (No. XV) of the literature of famines.

The Prevention of Famines in the Future.

It was no part of my original design to discuss the prevention of famines, but it was intimated on the former occasion that I should be expected to say something hereon. When we speak of the prevention of famines in the future, that expression must necessarily be understood in the sense, not of changing the course of the seasons, but the rather of understanding their course, and of being prepared for the emergencies such teaching may indicate; or at all events for those contingencies which a knowledge of the past must lead us to expect in the future. It is indeed to be hoped that continued improvements in agriculture and the extension of irrigation, will avert the frequency of the occurrence of famine: but on these we must not place too much reliance: they are at the best only aids, and slow of development.

That famines will occur in times to come is but too certain. The practical point we have to consider under this division of our subject is what can best be done to avert or mitigate their consequences?

If any one fact be made more clear than another from a study of the data contained in the tables in this paper, it is that famines cannot be averted by legislative action! Neither can this effectively restrain the operation of prices, which alone are and must always be regulated by supply and demand. And yet, because legislation has so signally failed in the directions in which it has been in the past most persistent, is that to be taken as an argument against all legislative measures in the future? Certainly not. *One of the objects most prominent in my mind during the whole course of investiga-*

tion for the purposes of the present paper, is that towards the legislation which will certainly follow the present inquiry, by commission, into the famines of India, and in which one of the most distinguished Fellows of this Society (Mr. James Caird, C.B.) is engaged—the facts here brought together will assuredly contribute. These facts go to show that the causes of famines are manifold: too much rain as frequently as too little; storms, and pests of insects and vermin. They go also to show what legislation *cannot* do, and therefore they simplify the problem of what it *can* do. This latter then is the point which we now have to consider.*

The function of legislation, as we now understand it, is to supply the people governed with the facilities for protecting themselves, and only to step in and attempt actual protection, pending the realisation of this process. In India people require the means of inland communication, and they require a currency adapted to the circumstances of their daily life. On the latter point I am not fully competent to speak. As to the former, I have already spoken in the first portion of this paper. It is a question between canals and railways—*canals* for cheapness of transit and for combining irrigation facilities, where practicable; railways for communication with distant provinces, for passenger transit, and for transit of perishable commodities. Canals and irrigation, unless based upon well-considered plans, are liable to break down when most needed, namely, in seasons of great drought.†

During the famine which terminated last year, the government tried an experiment which probably will never be repeated. It caused 30,000 tons of rice to be purchased; fearing, I suppose, that the ordinary laws of prompt supply where urgent demand arises would not there be equal to the emergency. In that view (if it were the official view) it was soon discovered they were mistaken. In future the course seems plain—give timely warning of approaching scarcity; leave the rest to mercantile enterprise. Of course, as to the conveyance of grain inland, help must be

* In India there have been many governmental restrictions regarding food supplies, and the mode of dealing in these; but regarding their details I am not sufficiently informed.

† Kaye remarks in his "History of Indian Progress," that the preciousness of water crops up incidentally in the oldest Hindoo writings extant. In the laws of Manu, at once the Noah and Solon of Indian myth, the breaker of a dam is sentenced to long immersion under water. Timur, too, whose invasion in 1398, together with the subsequent reign of four officers, the Sayids, as his viceroys, forms a marked feature in Indian history, ordained, whoever undertook the cultivation of waste lands, or built an aqueduct, or made a canal, or planted a grove, or restored to culture a deserted district, that in the first year nothing (in the way of taxes) should be taken from him, and that in the second year whatever the subject voluntarily offered should be received, and that in the third year the duties should be collected according to the regulation.

given, pending completion of the modes of transport; and upon this question of transport I do not propose to invoke any discussion on this occasion, knowing that the question is under imperial consideration.

In all I have said regarding India, I beg to disclaim any idea of imputing censure on the Government. A succession of great calamities in the way of famines have fallen upon that empire: the Government and its officials have struggled nobly with the difficulties presented; and but for these efforts the suffering, as also the mortality, would probably have been ten-fold. My point is, that hereafter we are to devise measures of permanent security, rather than rely upon temporary expedients, however energetically these may be executed. I have already indicated that the only mode of permanent prevention lies, in my belief, in improved means of cultivation, if practicable, and of transport as a necessity.

On the Mortality Occasioned by Famines.

In my table of famines, I have stated (wherever such estimates were found to exist) the mortality resulting from the particular famine under notice. It is only in exceptional cases that such estimates are given; and if they were given in every case, I fear they would mostly be panic estimates, and therefore not entitled to implicit credence.

But beyond the directly known, or calculable loss, I suspect there is a vast mortality occasioned by periods of scarcity which can only be arrived at by approximation. I am not about to attempt any detailed inquiry into this branch of the subject, which indeed might be found sufficient for a paper full of interest in the hands of any industrious member of this Society seeking for a subject. I propose simply to put on record some facts which have come before me almost incidentally in the progress of this inquiry.

It has been remarked that nearly all the great epidemics of fever, more especially of typhus, have occurred during seasons of scarcity and want. They are in fact associated with famine. In some instances the famine has been general, owing to failures of the crops, and the epidemics have been widespread: while in others the scarcity has been the result of artificial causes, such as strikes, commercial failures, sieges, &c., and the epidemics have been circumscribed. But whatever may have been the cause of the scarcity, it has been a common observation in many epidemics that the fever has raged among the poor in a degree proportionate to the privations they have endured. It was especially observable during the Irish potato famine: those persons who had been reduced by insufficient food were invariably attacked.

1802.—The seasons of 1799 and 1800 were “bad,” and the consequent dearth in 1801 and 1802 produced great distress. Parliamentary committees inquired into the means of supplying people with food. Before one of these committees the following return was made:—

Year.	Average Price of the Winchester Quarter of Wheat, Windsor Prices.		Corn Returns.	Burials in England.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	
1798.....	54	—	50	3	187,531
'99.....	75	8	67	6	189,586
1800.....	127	—	113	7	208,063
'01.....	128	6	118	3	204,434
'02.....	69	3	67	5	199,889

1804.—A writer in the “Edinburgh Review” (1829) instituted the following comparison: The year 1801 was a year of extreme scarcity. The number of births registered in England and Wales was 237,000, and the number of registered burials 204,000; whereas in 1804, which was a year of plenty, there were no fewer than 294,000 registered births, and only 181,000 registered burials; being an excess in the latter year of 57,000 births, and a diminution of burials, although out of a larger population.

1841.—Mr. Thomas Doubleday published, “The True Law of Population, shown to be connected with the Food of the People.”

1841-42.—In a valuable paper read before the Philosophical Society of Glasgow this year by Dr. R. D. Thomson (and published in the transactions of the Society for the fourteenth session), after noticing the number of deaths in England by starvation, or purely from want of food, the author says, “how many persons die by piecemeal starvation, or by disease engendered by bad food, or want of it, has not yet been pointed out by statistical data.” He also said:—

“We trust the day is fast approaching when the light of science will enable the guardians of the poor to manage our poverty-stricken fellow men by precise and definite rules, and will teach all classes of the community that the quantity of vital air supplied by the Creator to man is based on fixed laws which require the imbibition of a certain amount of food. An adult consumes every day 30½ ounces of oxygen or vital air from the atmosphere. To consume this and to convert it into carbonic acid, he requires, according to Liebig, about 13 ounces of carbon in the form of food. If the food is withheld, the carbon must be supplied from the muscles and substance of the body; the latter becomes thinner and weaker, and like an expiring taper is extinguished by the influence of the most trivial causes.”

1842.—The Report of a Committee of the British Association for the Advancement of Science: On the Vital Statistics of the Large

Towns of Scotland, published this year, contained the following passage :—

“ Though we may not be able to trace the effects of destitution in its different stages on the increase of disease and death, yet by the improvement of registers, and by greater attention to the vital statistics of different localities, and of different classes of the people, more certain knowledge may be obtained on this most important subject. The proof, however, which the preceding tables afford that the mortality for the different towns is in proportion to the amount of the poor and destitute in these towns, is supported by the amount of burials which take place in them at the public expense.”

1842.—In Professor Liebig’s Report on Organic Chemistry applied to Physiology and Pathology—of which an abstract made by Dr. Lyon Playfair appeared in the report of the British Association for this year—there is the following :—

“ Food is either applied in the increase of the mass of a structure (*i.e.*, in *nutrition*), or it is applied in the replacement of a structure wasted (*i.e.*, in *reproduction*). The primary condition for the existence of life is the reception and assimilation of food. But there is another condition equally important—the continual absorption of oxygen from the atmosphere. All vital activity results from the mutual action of the oxygen of the atmosphere and the elements of food. All changes in matter proceeding in the body are essentially chemical, although they are not unfrequently increased or diminished in intensity by the vital force. . . . ”

1846.—The Registrar-General, in his ninth annual report, reviewing the scarcity of food at this period, occasioned very much by the failure of the potato crop in Ireland, pointed out why such disasters were not so fatal to the people as was formerly the case :—

“ The quantity of food which a country imports does not depend merely on its wants ; it depends on its ability to pay for food from abroad ; the ability itself varying with the people’s powers of production and the prices of commodities in the foreign market. A purely agricultural ill-cultivated country such as *England* was in the middle ages, and such as parts of *Ireland* and *France* are, suffers more from the failure of a crop than a population like that of England now, whose income is derived from the several sources of agriculture, manufactures and commerce. It is not the less true that the partial destruction of the crops is an immense loss to the country.”

In the same year (1846) Dr. Farr read before the Statistical Society of London a most valuable paper: The Influence of Scarcities and of the High Prices of Wheat on the Mortality of the People of England [*Statistical Journal*, vol. ix, p. 158], wherein he says :—

“ If we may judge from the habits of the best and most vigorous races, man would appear to be able to live on great varieties of food ; but in respect to the quantity of nutritive matter, the law of his system is less flexible. In the cold, or engaged in hard work, he requires a large quantity of nutriment, and he soon becomes unable to take active exercise if the supply fall below a given point. Dalton—and subsequently Liebig—have shown that a certain number of ounces of carbon is burnt in the body, to keep up its slightly-varying temperature ; and that nitrogenous matter is required to replace the particles destroyed in the evolution of sensation, muscular actions and other functions.”

After reviewing the periods of scarcity in the history of Great Britain, and the prices of provisions at various periods, he proceeds :—

“The causes of a high mortality are various, but the greater number of known causes may be referred to five heads—1. Excessive cold or heat. 2. *Privation of food*. 3. Effluvial poisons generated in marshes, foul prisons, camps, cities; and epidemic diseases, such as typhus, plague, smallpox, and other zymotic diseases. 4. Mechanical and chemical injuries. 5. Spontaneous disorders to which the structure of the human organisation renders it liable. The first three classes of independent causes vary in intensity from year to year; and as *each* will separately produce the effect which we are investigating, namely, an increase of deaths, it must be evident that this effect will not always vary as privation, or as *any one* of the class of causes. For instance, the sweating sickness, said to have broken out in Richmond’s camp, spread through England and destroyed great numbers. It was a poison in the air, and, like other poisons, its fatal action was not stopped by abundance of food, although its ravages, if aided by famine, might have been rendered more deadly. So of the black death in 1348, the plague of 1665, the cholera of 1832.

“Then, low prices do not always denote plenty, nor high prices scarcity. And if high prices increase the mortality, any great mortality has a tendency to increase the price of provisions. Thus in 1349 ‘the price of every kind of cattle was much reduced; they wandered about in herds without herdsmen. Corn of all kinds was so abundant that no one gathered it.’ Workmen were scarce, a ‘great part’ of them having been destroyed, and demanded high wages. . . .

“These great disturbing causes and the imperfections of the returns require, for the elimination of their effects, a series of observations extending through a century. The concurrent evidence of the seventeenth and eighteenth centuries appears to me to justify the inference that high prices of wheat—I mean relatively high—irrespective of the other necessities of life, had then a tendency to increase the mortality of London.”

Much other information of interest is contained in Dr. Farr’s paper.

1862.—An inquiry was made by direction of the Privy Council into the nourishment of the distressed operatives of Lancashire and Cheshire—distressed by reason of the “cotton famine” then prevailing. This inquiry was conducted by Dr. Edward Smith, M.D.; and in his report was contained a theoretic estimate of the minimum quantity of food on which human life could reasonably be expected to subsist; and that estimate formed the scientific basis for such advice as was given to the cotton towns on the subject of their allowances for the poor. Its purport was, that in order to avert starvation-diseases an average woman’s daily food ought to contain at least 3,900 grains of carbon, with 180 grains of nitrogen, *i.e.*, for the woman about the same quantity of the nutritive elements as is contained in 2 lbs. of good wheaten bread; and for the man about one-ninth more.

1867.—In the thirteenth detailed report of the Registrar-General for Scotland, Dr. Stark, in reporting on the deaths, &c., of this year, says :—

“In countries where the mass of the population is dependent for their sustenance on the crops which they raise, and where they have little or no external trade, *it is the crops which are the great regulators of the mortality*, after the weather. For if the crops partially or wholly fail, the price of the food rises so high as to be beyond the power of purchasing by the lower classes. *In such countries, therefore, the amount of sickness and death almost invariably rises and all with the price of the provisions.* When provisions are abundant, and consequently cheap, the amount of sickness is small, and the death-rate low; but a failure of the crops almost invariably brings a high amount of sickness, and the death-rate becomes excessive.”

In Scotland, during the operation of the Registration Act, he had not found this law in operation.

Price of Wheat in England.

The following Table (XIV) is added in view of bringing into one focus the results (as affecting one principal article of food) of all the efforts, legislative and general, which have been made during the last eight centuries to counteract the effects of recurring periods of scarcity in England. If it had so chanced that in this country (as in the case in the West Indies, and perhaps in some few other portions of the globe) the supply of food had always been fully equal to the wants of the population, there would have been no necessity for any legislative restrictions at all. We may fairly say then that all the mass of legislation which we have reviewed has been designed to prevent the occurrence of undue fluctuations in the supply of food, and hence will necessarily have exercised its influence upon the prices embraced in the following table. It follows therefore that at least since legislative influences were brought into play *the prices recorded in the table are not those which have resulted naturally*; but that they are artificial prices, modified to a now unknown extent by the influences we have recorded; and some of these are stated to have existed long before the dates at which they became recorded in our statutes. The regulations indeed (or some of them) detailed in the preceding tables had been proclaimed orally from the market cross as being by the command of the sovereign. When written laws came into fashion, these were made to embody those yet earlier ordinations.

I confess it would be to me a matter of much interest to know the extreme range of prices which any famine has produced, where matters have simply been allowed to run their natural course. It is seen however that in such a case it is the poor who must be of necessity sacrificed, as their resources for purchasing food would be the sooner exhausted, and that therefore the wealth of the country, *i.e.*, its monetary resources, must always be an important element in the consideration of the influence of famines. Where money will not bring food, and a scarcity continues, the people must all

die out, unless such as have the means migrate forthwith to some land better supplied. I suspect in the eastern nations migrations have often been enforced by scarcity of food. With pastoral tribes the migration recurs with the change of seasons; the inhabitants are always following up their food supplies. A stationary population is of course always dependent for its sustenance upon the food supplies it can either produce or purchase. With such a people the price of food must always be regulated by two main factors—the *seasons* and the facilities or otherwise for obtaining *foreign supplies*.

In the preparation of the following table it has been necessary, in order to make the comparison of price consistent throughout the entire period over which it extends, to adjust the prices actually recorded (in the currency of the period) *to the standard of present values*. In this I have availed myself of the labours of several who have given much time to the subject—they are all named in notes appended, in relation to the particular part of the table resulting from their labours. I fear there may be a little disjointedness consequent upon treatment by several hands, but it is probably not very material on the whole.

I have sought by means of explanatory notes to draw attention briefly to the causes of the rise and fall of price at different periods. Reference to the preceding tables at the corresponding dates will complete this comparison, and in a certain sense reduce all that is contained in this and the previous part into one chronological whole.

By the term “price of wheat” too must be understood the *average* price as far as this has been capable of ascertainment. I think as illustrating the exact conditions and circumstances of the country at each period, a record of the highest and lowest prices would have been of more value; but these would be almost impossible of systematic compilation within the required space.

Again, I have prefixed an almost never-failing cause of disturbance in the price of grain, I mean the advent of “peace” or “war.” The occurrence of the latter has in almost every instance driven up the price—realising the meaning of the old phrase, “war prices.”

I think this table will be useful in the pages of the *Journal* of the Society for many purposes beyond that immediately before us.*

* Up to this date (1877), at least during the present generation (and we have not the means of going further back), the *price of food* has been regarded and proclaimed as the ruling factor in determining the *marriage-rate* in England and Wales. But the Registrar General in adjusting his account with Hymen and Co., now discovers that “the price of coals” is becoming a ruling factor in matrimony; for the marriage-rate perceptibly declines in those districts where coal mining has been less prosperous and remunerative; but this only (I assume) because the wage earning power is diminished.

TABLE XIV.—*The Price of Wheat in England and Wales from the Year A.D. 1000 (intermittent during the First Two Centuries and a Half), with a Statement of the Probable Causes Affecting the Price, as PEACE or WAR, ABUNDANCE or SCARCITY, LEGISLATIVE INTERFERENCES, &c.*

Note.—The values in column 3 are given in money of the present day. By "Winchester measure" is meant a quarter of 8 bushels of 8 gallons each.

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.		Notes, Explanatory, &c. [The money values in this column are not enlarged, but are quoted as given by the respective authors cited.]
		£	s. d.	
War	1000	—	1 6	1000. Ethelred II, an Anglo-Saxon king, was now on the throne. The purchasing price of land was from 5 <i>d.</i> to 1 <i>s.</i> 3 <i>d.</i> per acre; a horse was worth 1 <i>l.</i> 17 <i>s.</i> 6 <i>d.</i> ; a mare 1 <i>l.</i> 5 <i>s.</i> ; a cow 6 <i>s.</i> ; a sheep 1 <i>s.</i> 3 <i>d.</i> ; a goat 2 <i>s.</i> 9 <i>d.</i> ; a mule 15 <i>s.</i> ; an ox 7 <i>s.</i> 6 <i>d.</i> The price of wheat as here given is conjectural.
"	'01	—	1 6	
Peace	'02	—	1 6	
War	'03	—	1 6	
"	'04	—	1 6	
Peace	'05	—	1 6	
"	'06	—	1 6	
War	'07	—	1 6	
"	'08	—	1 6	1003. A <i>Land Tax</i> of 1 <i>s.</i> 3 <i>d.</i> for every hyde of land first imposed.
Peace	'09	—	—	
"	'10	—	—	
"	'11	—	—	1004. Famine.
War	'12	—	—	
"	'13	—	—	1008. Each 310 hydes of land were taxed to furnish a ship ready for war; and every 8 hydes one horseman. England was computed to contain 243,600 hydes.
"	'14	—	—	
"	'15	—	—	
"	'16	—	—	
"	'17	—	—	
Peace	'18	—	—	1013. Sweyn, a Danish king, ascended the English throne.
"	'19	—	—	
"	'20	—	—	
"	'21	—	1 6	1014. Canute succeeded Sweyn on the throne.
"	'22	—	1 6	
"	'23	—	1 6	1017. Canute became king of England. He levied a Dane-gelt of 216,000 <i>l.</i> ; but this was not collected till 1039.
"	'24	—	1 6	
"	'25	—	—	<i>Note.</i> —The Saxons and Danes at this period were accustomed to live under feudal laws; they were mostly addicted to arms and chivalry; and they only practised arts and agriculture to the extent their necessities compelled them.
"	'26	—	—	
"	'27	—	—	
"	'28	—	—	
"	'29	—	—	
"	'30	—	—	
"	'31	—	—	
"	'32	—	—	1036. Harold ascended the throne.
"	'33	—	—	
"	'34	—	—	1039. Hardicanute became king.
"	'35	—	—	The collection of the Dane-gelt caused an insurrection.
"	'36	—	—	
"	'37	—	—	
"	'38	—	—	1041. Edward the Confessor, a Saxon king, ascended the throne.
"	'39	—	—	
"	'40	—	—	
"	'41	—	15 3½	1041-43. Wheat dearer than it had been known within the memory of man. <i>Famine</i> caused by lightning burning grain in the field; followed by earthquake.
"	'42	—	—	
"	'43	—	15 3½	
"	'44	—	—	
"	'45	—	—	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1046	—	—	—	
"	'47	—	—	—	
"	'48	—	—	—	
"	'49	—	—	—	
"	'50	—	—	—	
Civil war	'51	—	—	—	
Peace	'52	—	14	6	
"	'53	—	—	—	
"	'54	—	14	6	
Civil war	'55	—	15	—	1054. Terrible famine.
"	'56	—	—	—	
"	'57	—	—	—	1066. Harold II began to reign. With his death ended the Saxon period, which had prevailed with varying fortunes for six centuries.
"	'58	—	—	—	William the Conqueror landed. The price of wheat from A.D. 1000 to this date is conjectured to have averaged 3s. 6d. a quarter.
"	'59	—	—	—	
"	'60	—	—	—	
"	'61	—	—	—	
"	'62	—	—	—	
Peace	'63	—	—	—	
"	'64	—	—	—	
"	'65	—	—	—	
War	'66	—	—	—	
Peace	'67	—	—	—	
"	'68	—	—	—	1067. A colt sold for 2s. 4½d.; a calf for a like sum.
"	'69	—	—	—	Note.—Whole armies of the English, including large numbers of yeomen, were transported to defend the foreign territories of the Conqueror. Agriculture suffered much in consequence.
"	'70	—	—	—	
"	'71	—	—	—	
"	'72	—	—	—	
"	'73	—	—	—	
"	'74	—	—	—	
Civil war	'75	—	—	—	
Peace	'76	—	—	—	
"	'77	—	—	—	
"	'78	—	—	—	
"	'79	—	—	—	
"	'80	—	—	—	
"	'81	—	—	—	
"	'82	—	—	—	
"	'83	—	—	—	
"	'84	—	—	—	
"	'85	—	—	—	1087. William II ascended the throne.
"	'86	—	—	—	
"	'87	—	—	—	1088. Oats sold at 1s. 3d. per quarter.
"	'88	—	3	1	Note.—William II followed the steps of his father. He taxed the land so heavily that agriculture was neglected. Most serious famines necessarily ensued.
"	'89	—	—	—	
"	'90	—	—	—	
"	'91	—	—	—	
"	'92	—	—	—	
"	'93	—	—	—	1095. The purchase of land was at a very low price, occasioned by the Crusade to the Holy Land. The religious houses bought many estates. An ox sold for 3½s.; a ram same price.
Civil war	'94	—	—	—	Note.—In this short reign of thirteen years four famines are recorded.
"	'95	—	—	—	
"	'96	—	—	—	
"	'97	—	—	—	
War	'98	—	—	—	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
War	1099	—	
"	1100	— 5 6	
"	'01	—	
"	'02	—	
"	'03	—	
"	'04	—	
"	'05	—	
"	'06	—	
"	'07	—	
"	'08	—	1100. Henry I began to reign. Sheep were sold for 1s. 6½d. each.
"	'09	—	
"	'10	—	
"	'11	—	1100. On the marriage of his daughter Matilda, Henry I laid an impost of 3s. upon every hyde of land. Rent of land was 1s. 6d. per acre.
"	'12	—	
Peace	'13	—	
"	'14	— 18 7	
"	'15	— 16 6	1111. Severe winter, destroyed agricultural produce, and caused severe famine, and mortality of cattle, poultry, &c.
"	'16	—	
"	'17	—	
"	'18	—	
"	'19	—	1115. The coin was observed to be greatly clipped, and steps were taken to improve it.
"	'20	—	
"	'21	—	
Civil war	'22	—	1120. About this date rents, which had been formerly paid in kind, became payable in money.
"	'23	—	
Peace	'24	—	
"	'25	— 18 7	1125. The custom now introduced that the tenants of the king's lands were to supply him and his court with provisions and carriage gratis when he travelled, caused many of them to desert their farms.
"	'26	—	
"	'27	—	
"	'28	—	
"	'29	—	
"	'30	—	
"	'31	—	1130. A standard was fixed for the regulation of weights and measures.
"	'32	—	
"	'33	—	
Civil war	'34	—	
"	'35	—	1135. Stephen ascended the throne. Feuds sprang up between the barons.
"	'36	—	
"	'37	—	
"	'38	—	
"	'39	—	
"	'40	—	
"	'41	— 1 3½	
Peace	'42	—	
"	'43	—	
"	'44	—	
"	'45	—	1145. The price of an ox was 9s. 3½d.
"	'46	—	
"	'47	—	
"	'48	—	
"	'49	—	1149. Coinage complications.
"	'50	—	
"	'51	—	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1152	—	—	—	1154. Henry II ascended the throne—first of the House of Plantagenet.
"	'53	—	—	—	
"	'54	—	—	—	
"	'55	—	3	1½	1155. The king repaired the coin, and ordered that his money only should be current. Oats sold for 1s. -½d. per quarter.
"	'56	—	—	—	
"	'57	—	—	—	
"	'58	—	—	—	
War	'59	—	—	—	1164. The carcase of a fat ox sold for 3s. 1½d., a fat sheep for 1s. -½d.
"	'60	—	3	1½	
"	'61	—	—	—	
"	'62	—	—	—	1177. A fat ox sold for 3s. 4d.; a fat sheep for 1s. -½d.
"	'63	—	—	—	
"	'64	—	5	6	1180. Debased coin called in.
"	'65	—	—	—	
"	'66	—	—	—	
"	'67	—	—	—	1184. (30 Henry II.) Madox, in his <i>Baronia Anglica</i> (c. 14), records that in this year 33 cows and 2 bulls cost but 8l. 7s. money of that age; 500 sheep, 22l. 10s., or about 10½d. per sheep; 66 oxen, 18l. 3s.; 15 breeding mares, 2l. 12s. 6d.; and 22 hogs, 1l. 2s.
"	'68	—	—	—	
"	'69	—	—	—	
"	'70	—	—	—	
"	'71	—	—	—	
"	'72	—	—	—	
"	'73	—	—	—	
"	'74	—	—	—	1188. A new Crusade was proclaimed. A tax of one-tenth on all movable goods was imposed.
"	'75	—	—	—	
"	'76	—	—	—	
"	'77	—	5	3	1189. Richard I ascended the throne; he remitted the Dane-gelt.
"	'78	—	—	—	
"	'79	—	—	—	
"	'80	—	—	—	1191. Labourers' wages at Croyland was 4½d. per day.
"	'81	—	—	—	
"	'82	—	—	—	
"	'83	—	—	—	1193. A tax of 15s. 6d. laid on every hyde of land.
"	'84	—	—	—	
"	'85	—	—	—	
"	'86	—	—	—	1196. One hundred acres of land were let for 3l. 2s.; an ox sold for 12s. 5d.; a labouring horse 12s. 5d.; a sow 3s.; a sheep with fine wool 2s. 7d.; with coarse wool 1s. 6½d. A law enacted that there should be but one weight and one measure throughout the land; unhappily not enforced.
"	'87	—	—	—	
"	'88	—	—	—	
"	'89	—	—	—	
"	'90	—	—	—	
"	'91	—	—	—	
"	'92	—	—	—	
"	'93	—	—	—	
"	'94	—	—	—	1199. John ascended the throne. The price of wheat during the period 1066-1199 probably averaged 3s. 1d. per quarter.
"	'95	—	—	—	
"	'96	2	2	9	
"	'97	2	18	6	
"	'98	—	—	—	1200. Beer more generally brewed, principally for the use of the gentry. It was employed before this date in the administration of the Sacrament. The Council of Winchester this year substituted wine. Red wine was 1s. 6½d. per gallon.
"	'99	—	—	—	
"	1200	—	—	—	
"	'01	—	—	—	
"	'02	1	17	2	
"	'03	—	—	—	
"	'04	—	—	—	1202. Coin again debased.

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
War	1205	1	17	2	1205. Peas and beans sold for 1 <i>l.</i> -s. 8 <i>d.</i> per quarter.
"	'06	2	1	4	
"	'07	—	—	—	1206. Oats were 10 <i>s.</i> 4 <i>d.</i> per quarter.
"	'08	—	—	—	<i>Note.</i> —The land at this date was under the Pope's interdict.
"	'09	—	—	—	
"	'10	—	—	—	1215. <i>Magna Charta</i> granted.
"	'11	—	—	—	
"	'12	—	—	—	
"	'13	—	—	—	1216 Henry III ascended the throne. Sea coals, <i>i.e.</i> sea-borne coals, were first used in the south of England. License was given to the people of Newcastle to work their mines.
Civil war	'14	—	—	—	
"	'15	—	—	—	
"	'16	—	—	—	
"	'17	—	—	—	
"	'18	—	—	—	1217. The price of ale fixed.
"	'19	—	—	—	
"	'20	—	—	—	
"	'21	—	—	—	1222. Great storms, with lightning and immense floods in England, commencing in May and extending into the following year. The stipend of a priest at this date was 1 <i>ol.</i> 6 <i>s.</i> 8 <i>d.</i> per annum. He was not expected to support a curate.
"	'22	1	17	2½	
"	'23	1	17	2½	
"	'24	—	—	—	
"	'25	—	—	—	
"	'26	—	—	—	1225. The hire of a cart with two horses was 2 <i>s.</i> 7 <i>d.</i> per day; with three horses 3 <i>s.</i> 7½ <i>d.</i>
"	'27	—	—	—	
"	'28	—	—	—	
"	'29	—	—	—	1232. A great frost began at Christmas and lasted till Candlemas without snow, rendering the ground unfit to be tilled.
"	'30	—	—	—	
"	'31	—	—	—	
"	'32	—	—	—	
"	'33	—	—	—	1234. Great famine and extensive mortality. The interest of money is recorded as having been 40 per cent. this year.
"	'34	1	17	2½	
"	'35	—	—	—	
"	'36	—	—	—	
"	'37	—	10	4	1237. Barley was 6 <i>s.</i> 2½ <i>d.</i> per quarter; oats 3 <i>s.</i> 1½ <i>d.</i>
"	'38	—	—	—	
"	'39	—	—	—	
"	'40	—	10	4	1240. Gold coinage was first introduced about this date
"	'41	—	—	—	
"	'42	—	—	—	
"	'43	—	6	2½	1243. The king exported 100,000 quarters of wheat and 5,000 quarters of oats for the use of his army in France; but so abundant was the harvest that the price of grain was not much affected thereby. Peas were 6 <i>s.</i> 2½ <i>d.</i> per quarter.
"	'44	—	6	2½	
"	'45	—	—	—	
"	'46	2	9	7	
"	'47	2	1	4	
"	'48	—	—	—	1246. The coin so "egregiously clipped" as to put wheat at famine prices.
"	'49	—	—	—	
"	'50	—	—	—	
"	'51	—	—	—	1251. The king fixed the assize of bread in proportion to the price of wheat, ranging from 3 <i>s.</i> 1 <i>d.</i> to 1 <i>l.</i> 3 <i>s.</i> 3 <i>d.</i> per quarter; the first precedent of this sort having been set in the reign of John.
"	'52	—	—	—	
"	'53	—	—	—	
"	'54	—	—	—	
"	'55	—	—	—	
"	'56	—	—	—	1255. The rate of interest of money raised to 50 per cent. by reason of the export of coin.
"	'57	3	14	5	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1258	2	9	7	1258. The first outline of a Commons Parliament secured this year.
"	'59	—	5	9 $\frac{3}{4}$	The prices given down to this date are mostly drawn from Sir CHARLES WHITWORTH'S <i>Enquiry into Prices</i> , 1768.
"	'60	—	4	9	1259. From this date the prices are supposed to represent the average of those which prevailed in various parts of the kingdom, as compiled by Professor T. ROGERS. See 1400.
"	'61	—	4	3	1266. The assize of bread was again regulated by statute of this year.
"	'62	—	6	1	1270. The <i>Chronicon Preciosum</i> (published 1707) states that wheat ranged from 4 <i>l.</i> 1 <i>s.</i> to 6 <i>l.</i> 8 <i>s.</i> per quarter this year. Sir Charles Whitworth quotes 14 <i>l.</i> 17 <i>s.</i> 6 <i>d.</i> with a rise to 19 <i>l.</i> 16 <i>s.</i> 9 <i>d.</i> per quarter.
"	'63	—	3	11 $\frac{3}{8}$	1272. During the reign of Henry III, which terminated this year, barley was reported to be 2 <i>s.</i> per quarter; oats, 1 <i>s.</i> ; a good horse 10 <i>s.</i> Edward I began to reign.
"	'64	—	4	4	The Common Council of London made regulations for markets.
"	'65	—	3	3	1286. Such a storm of rain, thunder and lightning fell on St. Margaret's night, that wheat came by degrees to 16 <i>s.</i> the quarter.— <i>Chronicon Preciosum</i> .
"	'66	—	4	5 $\frac{1}{2}$	1287. This is the lowest average price of which we have any record until 1454; it had not been so low since 1140. See note, 1288.
"	'67	—	4	5 $\frac{1}{4}$	The Synod of Exeter decreed every parochial church should be endowed with 10 <i>l.</i> 6 <i>s.</i> 8 <i>d.</i> per annum. The rectors were to give their curates 6 <i>l.</i> 4 <i>s.</i> per annum.
"	'68	—	5	3 $\frac{3}{8}$	1288. So great a plenty of corn and scarcity of money that wheat was sold by the quarter at 1 <i>s.</i> 6 <i>d.</i> — <i>Chronicon Preciosum</i> .
"	'69	—	5	—	The summer exceedingly hot, and many died in consequence.—PENKETHMAN.
"	'70	—	6	4 $\frac{5}{8}$	1290. The 17th Edward I (1289) great hail fell in England, and after ensued great rain, that the year following wheat was raised from 3 <i>d.</i> the bushel to 16 <i>d.</i> —PENKETHMAN.
"	'71	—	6	10 $\frac{7}{8}$	Edward I, after seizing the alien priories, allowed every monk 12 <i>l.</i> 1 <i>s.</i> 9 <i>d.</i> per annum.
"	'72	—	6	4 $\frac{3}{8}$	During this reign a fat capon sold for 1 $\frac{1}{2}$ <i>d.</i> ; a goose for 4 <i>d.</i> ; and a lamb for 4 <i>d.</i>
"	'73	—	5	5 $\frac{3}{4}$	1297. The king seized 2,000 quarters of wheat and 2,000 quarters of oats out of every shire in England for the use of his army going abroad.
"	'74	—	6	9 $\frac{1}{4}$	1299. An Act of the Common Council of London regulating the price of victuals.
"	'75	—	5	7 $\frac{1}{4}$	1302. Bakers of London first allowed to sell bread in their own shops.
"	'76	—	6	2 $\frac{5}{8}$	
"	'77	—	5	1 $\frac{3}{4}$	
"	'78	—	4	4 $\frac{5}{8}$	
"	'79	—	5	1 $\frac{1}{4}$	
"	'80	—	4	11 $\frac{7}{8}$	
"	'81	—	6	— $\frac{3}{4}$	
"	'82	—	5	11 $\frac{1}{2}$	
"	'83	—	6	11 $\frac{1}{4}$	
"	'84	—	4	11 $\frac{3}{4}$	
"	'85	—	5	4 $\frac{1}{4}$	
"	'86	—	4	9	
"	'87	—	2	10 $\frac{1}{4}$	
"	'88	—	3	— $\frac{5}{8}$	
"	'89	—	4	3 $\frac{1}{2}$	
"	'90	—	6	5 $\frac{1}{2}$	
"	'91	—	5	7 $\frac{1}{4}$	
"	'92	—	5	4 $\frac{7}{8}$	
"	'93	—	8	3 $\frac{1}{8}$	
"	'94	—	9	1 $\frac{1}{8}$	
"	'95	—	6	9	
"	'96	—	4	9 $\frac{1}{4}$	
"	'97	—	5	2 $\frac{1}{2}$	
"	'98	—	5	2 $\frac{1}{8}$	
"	'99	—	6	— $\frac{3}{4}$	
"	1300	—	4	9	
"	'01	—	5	— $\frac{1}{2}$	
"	'02	—	4	11 $\frac{1}{2}$	
"	'03	—	4	1 $\frac{1}{4}$	
"	'04	—	5	9 $\frac{1}{2}$	
"	'05	—	4	10 $\frac{7}{8}$	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1306	—	3	11 $\frac{3}{8}$	1306. The price of wheat during the reign of John, Henry III, and Edward I is said, by Sir Charles Whitworth, to have averaged 1 <i>l.</i> 3 <i>s.</i> 2 $\frac{1}{2}$ <i>d.</i> per quarter; but no such average is made by our table.
"	'07	—	5	6 $\frac{1}{2}$	
"	'08	—	6	11 $\frac{1}{4}$	
"	'09	—	7	9 $\frac{3}{8}$	
"	'10	—	7	— $\frac{1}{2}$	
"	'11	—	4	5 $\frac{1}{4}$	1307. Edward II ascended the throne. Peace with Scotland; but the Scots still ravaged the border counties and destroyed the crops.
"	'12	—	4	11 $\frac{3}{8}$	New regulation for assize of bread in London, See Table IX.
"	'13	—	5	6 $\frac{3}{8}$	
War	'14	—	8	4 $\frac{3}{8}$	
"	'15	—	14	10 $\frac{7}{8}$	
Peace	'16	—	15	11 $\frac{5}{8}$	1310. A man-at-arms was allowed 2 <i>s.</i> 6 $\frac{1}{2}$ <i>d.</i> per day; a cross-bow man 9 $\frac{1}{4}$ <i>d.</i> ; an archer 6 <i>d.</i>
"	'17	—	8	3 $\frac{1}{2}$	At this period wheat was frequently malted as well as barley; it was on this account that the price of malt was frequently quoted so high.
"	'18	—	4	6 $\frac{1}{2}$	
"	'19	—	5	9 $\frac{5}{8}$	
"	'20	—	6	5	
"	'21	—	11	7 $\frac{3}{4}$	1314. The price of flesh and fowle in the city fixed by Act of Parliament. Rains at harvest raised the price of corn.
Civil war	'22	—	8	11 $\frac{7}{8}$	
"	'23	—	7	5 $\frac{3}{8}$	
"	'24	—	7	4 $\frac{5}{8}$	1315. This was the first year of the great famine. Great mortality amongst cattle.
"	'25	—	5	8 $\frac{3}{8}$	
"	'26	—	3	7 $\frac{7}{8}$	1316. This, as the highest average price reached during this century, wheat was ordered not to be malted.
Peace	'27	—	3	11	
"	'28	—	6	5 $\frac{1}{2}$	
"	'29	—	6	6 $\frac{3}{8}$	1317. "The harvest was early, so that all the corne was inned before St. Giles' Day, being the 1st September; a bushel of wheat which before was sold for 10 <i>s.</i> was then sold for 10 <i>d.</i> ; and a bushel of oats which before was sold for 8 <i>s.</i> was then sold for 8 <i>d.</i> "—PENKETHMAN.
War	'30	—	7	2 $\frac{1}{4}$	
"	'31	—	7	11 $\frac{1}{4}$	
"	'32	—	4	8 $\frac{5}{8}$	
"	'33	—	4	2 $\frac{3}{8}$	
"	'34	—	4	— $\frac{1}{8}$	
"	'35	—	5	3 $\frac{1}{2}$	1323-24. The Parliament of Ireland passed an Act, 17 Edward II, cap. 3, encouraging exports of grain, except to enemies. This is the first instance on record.
"	'36	—	4	11	
"	'37	—	3	7	
"	'38	—	3	2 $\frac{5}{8}$	
"	'39	—	5	10 $\frac{3}{4}$	1327. During the reign of Edward II, which ended this year, the following prices are quoted: a cow, 6 <i>s.</i> ; a hog, 3 <i>s.</i> 2 $\frac{1}{2}$ <i>d.</i> ; a fat sheep, 1 <i>s.</i> 8 <i>d.</i> ; a sheep, 1 <i>s.</i> ; a pig, 6 <i>d.</i> ; a fat goose, 2 $\frac{1}{2}$ <i>d.</i> ; a capon, 2 <i>d.</i> ; a gallon of ale, 1 <i>d.</i> ; an acre of pasture, 1 <i>d.</i> ; a pair of shoes, 4 <i>d.</i> Edward III began to reign.
"	'40	—	3	6 $\frac{1}{2}$	
"	'41	—	3	9 $\frac{5}{8}$	
"	'42	—	4	1 $\frac{1}{8}$	
"	'43	—	5	7 $\frac{3}{4}$	
"	'44	—	3	6	
"	'45	—	3	9 $\frac{7}{8}$	
"	'46	—	6	10 $\frac{1}{2}$	1329. The importation of wheat, rye or barley into England prohibited unless the prices rose above limits set in the Act.
"	'47	—	6	7 $\frac{3}{8}$	
"	'48	—	4	2	
"	'49	—	5	5 $\frac{7}{8}$	1340. A yard of the best cloth at this date cost 1 <i>s.</i> 8 <i>d.</i>
"	'50	—	8	3 $\frac{1}{8}$	
"	'51	—	10	2 $\frac{1}{2}$	1347. First record of corn being imported into England; but see 1323-24.
"	'52	—	7	2 $\frac{1}{8}$	
"	'53	—	4	2 $\frac{1}{2}$	1348. The plague. Provisions were sold off at very low prices.
"	'54	—	5	3 $\frac{3}{4}$	1350-51. The bushel of wheat was to be taken as of the value of 10 <i>d.</i> , 25 Edward III, statute 2, cap. 1.
					1354. England suffered a great drought, which lasted from March to the end of July.

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.		Notes, Explanatory, &c.
		£	s. d.	
War	1355	—	5 11 $\frac{3}{8}$	1355. Considerable scarcity; grain imported from Ireland.
"	'56	—	6 —	
"	'57	—	6 10 $\frac{3}{4}$	
"	'58	—	5 6 $\frac{1}{2}$	1360. <i>Exportation</i> of corn forbidden, except to Calais and Gascon.
"	'59	—	5 11	
Peace	'60	—	6 3 $\frac{1}{2}$	
"	'61	—	5 4 $\frac{3}{4}$	1361. The stipends of the clergy were reduced to 8 <i>l.</i> 5 <i>s.</i> per annum by the Archbishop of Canterbury. The wages of artificers were increased.
"	'62	—	7 6	
"	'63	—	8 6	
"	'64	—	7 5 $\frac{3}{8}$	
"	'65	—	6 — $\frac{3}{8}$	1362. Act regulating the price of poultry.—37 Edward III, cap. 3.
"	'66	—	6 8	
"	'67	—	8 7 $\frac{1}{2}$	
"	'68	—	6 7 $\frac{5}{8}$	1363. Servants to eat flesh or fish but once a-day.—37 Edward III, cap. 8.
"	'69	—	11 10 $\frac{1}{4}$	
"	'70	—	9 4 $\frac{5}{8}$	
"	'71	—	6 11 $\frac{3}{8}$	1365. An ordination promulgated in London regarding sale of horse bread.
"	'72	—	7 10 $\frac{1}{4}$	
"	'73	—	6 2 $\frac{1}{4}$	
"	'74	—	8 2 $\frac{1}{2}$	1376. The value of land, as also the rent of it, very much reduced by depression of trade.
"	'75	—	7 9 $\frac{1}{8}$	
"	'76	—	4 9	
Civil war	'77	—	3 8 $\frac{3}{8}$	1377. Richard II ascended the English throne.
"	'78	—	3 6 $\frac{7}{8}$	
"	'79	—	5 9 $\frac{3}{8}$	1379. The 3 Richard II, "A bushell of wheat sold for 6 <i>d.</i> ; a gallon of white wine for 6 <i>d.</i> ; of red for 4 <i>d.</i> ."—PENKETHMAN.
"	'80	—	6 2 $\frac{7}{8}$	
"	'81	—	5 7 $\frac{1}{4}$	
"	'82	—	5 3 $\frac{1}{2}$	
"	'83	—	4 10	1387. The 10 Richard I, "In the beginning of the year at <i>Leicester</i> , 100 quarters of barley were sold for 100 shillings."—PENKETHMAN.
"	'84	—	5 7	
"	'85	—	5 — $\frac{5}{8}$	
"	'86	—	4 1	
"	'87	—	3 4 $\frac{3}{4}$	1391. The measuring of grain to be made uniform throughout the realm.—15 Richard II, cap. 4.—Grain <i>imported</i> by lord mayor for the people.
"	'88	—	3 8 $\frac{5}{8}$	
"	'89	—	5 5 $\frac{3}{4}$	
"	'90	—	8 9	
"	'91	—	5 5 $\frac{7}{8}$	1393. <i>Export</i> of corn freely permitted.—17 Richard II, cap. 7.
"	'92	—	3 2 $\frac{5}{8}$	
"	'93	—	3 8 $\frac{3}{4}$	
"	'94	—	3 10 $\frac{3}{4}$	
"	'95	—	5 —	1399. Henry IV (first of the House of Lancaster) ascended the throne.
"	'96	—	5 11 $\frac{1}{2}$	
"	'97	—	5 9 $\frac{3}{8}$	
"	'98	—	5 2 $\frac{3}{4}$	1400. The prices down from 1259 to this date are obtained from Professor T. Rogers's table in <i>History of Agriculture and Prices</i> , 1866. The average price during the whole period of 140 years was 5 <i>s.</i> 10 $\frac{1}{4}$ <i>d.</i> per quarter.
"	'99	—	5 6 $\frac{3}{8}$	
"	1400	—	7 11 $\frac{1}{8}$	
"	'01	—	11 —	
"	'02	—	6 —	
"	'03	—	3 7	
"	'04	—	2 8	1401. The prices from this date are those given by Sir Fred. M. Eden (<i>History of the Poor</i>).
"	'05	—	5 4	
"	'06	—	5 2	
"	'07	—	4 —	1407. Great plague; 30,000 persons died in England.

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
Civil war	1408	—	1410. The rent of arable land was 1s. 1½d.; of meadow 11½d. per acre.
"	'09	— 6 8	
"	'10	—	
"	'11	— 4 —	1411. It was estimated that one-third of the lands of the kingdom belonged to the Church.
"	'12	—	The rents were easy: the income therefrom 627,266l. per annum.
"	'13	—	
War	'14	— 6 8	1413. Henry V ascended the throne.
"	'15	— 7 4	
"	'16	— 13 —	
"	'17	— 6 6	
"	'18	—	1418. The price of wheat during the reigns of Edward II, Edward III, Richard II and Henry IV with Henry V is estimated by Whitworth to have averaged 15s. per quarter; again much above the price in this table.
"	'19	—	The 1l. of this period represents 1l. 18s. 9d. of our present money; but for this allowance has been made in the prices in this table.
"	'20	—	
"	'21	—	
Peace	'22	—	
"	'23	— 8 —	
"	'24	— 5 10	
War	'25	— 6 6	
"	'26	— 4 3	1422. Henry VI ascended the throne.
"	'27	— 4 —	
"	'28	— 4 6	
"	'29	— 8 4	1425. The statute of Richard II, cap. 7, was confirmed.
"	'30	— 7 —	
"	'31	— 6 —	
"	'32	—	1430. Every elector of members to serve in Parliament required to possess a clear 40s. freehold.
"	'33	—	
"	'34	I 6 8	
"	'35	— 5 4	1434. Great rainfall and floods—wheat very dear.— <i>Chronicon Preciosum</i> .
Peace	'36	— 6 8	
"	'37	— 4 6	
"	'38	— 14 10	1436. The importation and exportation of corn to be permitted without hindrance—15 Henry VI, cap. 2.
"	'39	— 15 1	
"	'40	— 9 9	
"	'41	— 4 1	
"	'42	— 6 8	1440. Vicarages augmented to 16l. 9s. 7d. per annum.
"	'43	—	
"	'44	— 5 —	
"	'45	—	
"	'46	— 6 6	1446. The wages of a bailiff for husbandry were 2l. 7s. per annum, with diet and clothes; a chief carter and a chief shepherd 2l. 4s. 1½d., with diet and clothes; a common husbandry servant 1l. 11s.; a woman servant 1l. —s. 7d. per annum.
"	'47	— 5 3	
"	'48	— 5 10	
"	'49	— 5 2	
Civil war	'50	— 4 —	1454. This appears to be the lowest price on record. "Wheat and other graine were in such plentie, that a quarter of wheat commonly sold for 12 pence or 14 pence; of mault for 16 or 17 pence at the most. A certaine farmer dwelling in Cruse Roysie, or Rosie Town [Royston] in Hertfordshire, sold 20 quarters of the best wheat for 20 shillings."—PENKETHMAN. See 1287.
"	'51	— 7 —	
"	'52	— 5 —	
"	'53	— 5 4	
"	'54	— 2 2	
"	'55	— 4 —	
"	'56	— 5 —	
"	'57	— 6 4	
"	'58	— 4 —	
"	'59	— 5 —	
"	'60	— 6 3	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
Civil war	1461	— 4 —	1461. Edward IV ascended the throne.
"	'62	— 5 —	
"	'63	— 3 8	1463. Importation of wheat forbidden by 3 Edward IV, cap. 2, unless wheat exceeding in price 6s. 8d. per quarter; rye, 4s.; and barley, 3s.
"	'64	— 6 8	
"	'65	— —	
"	'66	— 5 8	
"	'67	— —	
"	'68	— 5 10	
"	'69	— 6 —	
"	'70	— —	
"	'71	— —	
"	'72	— —	
"	'73	— —	
"	'74	— —	1474. A land tax of 3s. 3½d. in the pound, beside $\frac{1}{15}$ th and $\frac{3}{4}$ ths of, or 15th in movables, for a war with France.
"	'75	— —	
"	'76	— —	
"	'77	— —	
"	'78	— —	
"	'79	— —	
"	'80	— 8 —	
"	'81	— 6 10	
"	'82	— —	
"	'83	— 5 5	1483. Richard III began to reign.
"	'84	— 5 4	
Peace	'85	— 3 10	1485. Henry VII (first of the House of Tudor) became king.
"	'86	— 16 4	Leaden-hall, the great city granary, was burnt.
"	'87	— 4 8	
Civil war	'88	— 4 4	1486. "Wheat was sold at 3s. the bushell, and baysalt at the like price."
"	'89	— 3 8	
"	'90	— —	
"	'91	— 10 8	
"	'92	— 4 8	1491. "Wheat was sold at London for 20 pence the bushell, which was accounted a great dearth."
"	'93	— 4 —	—PENKETHMAN.
"	'94	— 4 —	
"	'95	— 3 4	
"	'96	— 4 4	
"	'97	— 1 —	
"	'98	— 4 —	
Peace	'99	— 5 —	
"	1500	— 3 4	
"	'01	— 7 —	
"	'02	— —	
"	'03	— 5 10	1508. The influx of gold and silver from the continent of America, then recently (1492) discovered by Columbus, caused a great advance in prices generally, commencing about this period.
"	'04	— 5 10	
"	'05	— 6 8	
"	'06	— —	
"	'07	— —	
"	'08	— —	1509. Henry VIII ascended the throne.
"	'09	— 3 8	
"	'10	— —	1510. The lord mayor of London caused the city granary at Leaden-hall to be plentifully stored with all sorts of grain.
"	'11	— 6 8	
"	'12	— 18 8	
"	'13	— 7 4	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1514	—	8	8	1514. The wages of master masons, carpenters, rough masons, bricklayers, tylers, plumbers, glaziers, carvers, and joiners, without diet, $8\frac{1}{4}d.$ per day; common labourers $5\frac{1}{2}d.$
"	'15	—	6	—	
"	'16	—	8	4	
"	'17	—	—	—	
"	'18	—	13	—	1516. The king in council order an assay of bread.
"	'19	—	10	3	
"	'20	—	8	—	1520. The purchase price of land at this period was ten years' rental.
"	'21	1	3	4	
"	'22	—	9	4	1521. Famine, war, and pestilence, lasting three years, but inflicting less misery than such occurrences did in earlier times.
"	'23	—	—	—	
"	'24	—	13	4	
"	'25	—	10	2	1524. Hops first cultivated in England, and leading to great increase in consumption of malt liquors.
"	'26	—	—	—	
"	'27	—	14	7	
"	'28	—	18	1	
"	'29	—	18	—	1526. Considerable quantities of grain imported from Dantzic.
"	'30	—	5	4	
"	'31	—	—	—	1527. Much want in London. The king sent a present of 1,000 quarters of wheat to the city.
"	'32	—	—	—	
"	'33	—	—	—	1533. The price of victuals attempted to be regulated by Act of Parliament. See Table IX.
"	'34	—	7	7	
"	'35	—	—	—	1534. The Reformation. Church lands forfeited.
"	'36	—	—	—	
"	'37	—	13	4	1536. Act for promoting tillage by erecting farm-houses to every 50, 40, or 30 acres of land; this led gradually to a considerable rise in rents.
"	'38	—	17	4	
"	'39	—	13	4	
"	'40	—	13	4	
"	'41	—	18	8	1545. For the war with Scotland a land tax of 1s. $4\frac{3}{4}d.$ was imposed.
"	'42	—	14	8	
"	'43	1	—	—	1547. Edward VI began to reign.
"	'44	1	5	4	
"	'45	—	18	8	1550. Act against regratours, forestallers, and engrossers. See Table XII.
"	'46	—	—	—	
"	'47	—	—	—	1553. Mary began to reign. "Victuals were so plentiful, that a barrell of beere was sold for 6d., with the caske, and 4 great loaves of bread for 1d."—PENKETHMAN.
"	'48	—	6	8	
"	'49	—	—	—	
"	'50	—	14	1	1555. Export of corn and victual without license prohibited.—1 and 2 Phillip and Mary, cap. 5.
"	'51	—	11	—	
"	'52	—	17	6	
"	'53	—	11	7	1557. Wheat was sold before harvest for 4 marks the quarter, but after harvest for 5s. "So that a penny loaf, which weighed in London this last year but 11 ounces troy, weighed near 26 ounces troy."—PENKETHMAN.
"	'54	—	11	—	
"	'55	—	9	8	
"	'56	1	7	5	
"	'57	—	18	—	
"	'58	—	9	9	
"	'59	—	12	—	
"	'60	1	18	5	All the wheat and other provisions which could be found in Norfolk or Suffolk this year, were seized for victualling the fleet.
"	'61	—	—	7	
"	'62	—	17	6	1558. Elizabeth ascended the throne. Corn might be exported from Norfolk and Suffolk.—1 Elizabeth, cap. 11.
"	'63	—	17	6	
"	'64	—	16	—	
"	'65	—	18	5	1562. Corn might be exported by British subjects in British ships.—5 Elizabeth, cap. 5.
"	'66	—	17	—	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1567	—	15	—	1569. The rate of interest for money was lowered to 6 per cent.
"	'68	—	13	4	1570. This was a year of scarcity, and wheat was 16s. per quarter. Labourers' wages, without diet, were 5d. per day. The lord mayor laid in a stock of 6,000 quarters of wheat in the Bridewell public granaries.
"	'69	—	16	—	
"	'70	—	—	—	
"	'71	—	—	—	1571. Corn might be exported to <i>friendly countries</i> . Export duty of 12d. per quarter imposed by 13 Elizabeth, cap. 13.
"	'72	1	—	6	1573. "About Lammas wheat was sold for 3s. the bushell, but shortly after it was rayased to 4s., 5s., 6s., and before Christmas to a noble and 7s., which so continued long after; yet there was no want to him that wanted not money."—PENKETHMAN. The rise in price was attributed to over exportation of grain to the Netherlands.
"	'73	1	12	9	
"	'74	1	4	—	
"	'75	1	—	—	
"	'76	—	16	—	
"	'77	—	—	—	
"	'78	—	18	—	1580. The end of the <i>Eden</i> prices.
"	'79	—	16	3	1582. From this date down to 1770 the prices are those ascertained by the audit books at Eton College; quantities reduced to Winchester measure. The baker and brewer of the College attended Windsor market on the market days preceding Lady-day and Michaelmas, and made a record of the highest prices that wheat and malt were sold for on these days. These records, alike for prices and fixed measure, have long been famous.
"	'80	1	8	—	
"	'81	—	—	—	
"	'82	—	18	2	
"	'83	—	17	2	
"	'84	—	15	8½	
"	'85	1	1	—½	
"	'86	1	12	—	1586. Corn to be stored in London in view of famine, by order of the lord mayor.
"	'87	1	7	10	1588. The price of sea-coal was by a combination among the coal owners raised from 4s. 2d. to 9s. 3d. per chaldron.
War	'88	—	14	2½	1593. Export of corn might be prohibited generally or locally.—35 Elizabeth, cap. 7.
"	'89	—	19	6	1594. Dearth occasioned by excessive exportation. The rapid and continued rise in the price of wheat from this date onward was considered to be the result of several combined causes, of which the chief was believed to be speculation in the way of monopoly.
"	'90	1	3	1	The lord mayor of London enjoined the people of the city to lay in provisions of grain. The Bridge house was then a common granary for the city.
"	'91	1	—	2	
"	'92	—	16	7	
"	'93	—	18	4½	
"	'94	1	12	—	
"	'95	1	18	6	
"	'96	2	6	3	
"	'97	2	16	10½	1595. New regulations as to the assize of bread issued in London.
"	'98	1	17	11	1596. Dearth occasioned by great rains.
"	'99	1	3	8½	37 Elizabeth, "In August, September, October, and November fell great store of raine, and wheat in meale was sold at London for 10s. the bushell; yet thro' the diligent carefulnesse of Thomas Skinner, then lord maior, provision was made
"	1600	1	9	—½	
"	'01	1	6	8	
"	'02	1	4	3½	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
War	1603	1	6	8	for corne to be brought from Danshe [Danzic] and other the east countreys by our merchants, unto whom was granted custome and stowage free, as also to make their own price, <i>or transport to any part of this realme</i> ; whereupon it followed, were the price never so high, this citie never wanted corne for their money."—PENKETHMAN.
Peace	'04	1	4	3½	1603. James I (first of the House of Stuart) ascended the English throne. All monopolies suspended.
"	'05	1	6	10½	1604. Exportation of corn permitted when below certain prices named.—1 James I, cap. 25.
"	'06	1	5	5½	1606. Interest of money 8 per cent.
"	'07	1	9	—½	1608. Bread very dear in London.
"	'08	2	4	5½	1610. Twelve new public granaries erected in Bridewell.
"	'09	2	—	4	1618. Commissioners were directed to buy and fill the public granaries with grain.
"	'10	1	7	3	1621. Interest of money 10 per cent. Land at fourteen to fifteen years' purchase.
"	'11	1	10	3	1622. Great quantities of grain imported. The desire to produce wool had caused arable lands to be converted to pasture.
"	'12	1	16	9	1623. Exportation of grain allowed, according to scale of prices, and on payment of customs, making the impositions for export very heavy, and all bounty withdrawn. 21 James I, cap. 28.
"	'13	1	19	2½	1624. An Act against forestallers and engrossers. An Act against monopolies.
"	'14	1	19	1½	Average price of wheat during reign of James I 1 <i>l.</i> 12 <i>s.</i> 3½ <i>d.</i> Ale and beer 4 <i>d.</i> per gallon; small beer 2 <i>d.</i>
"	'15	1	14	1½	1625. Charles I ascended the throne. An Act to restrain drunkenness.
"	'16	1	14	11½	1626. Nine-tenths of the trade of England was in <i>wool</i> and woollen goods.
"	'17	1	19	8½	1629. The king, to raise money, grants monopolies.
"	'18	1	17	5½	1630. A famine expected. Proclamation by the king.
"	'19	1	10	10	1634. Many persons fined considerable amounts for converting arable land to pasture contrary to the Act of Henry VII.
"	'20	1	6	4½	1640. Monopolies again abolished by Parliament. Mr. Pym complained in the House of Commons that salt, soap, beer, coals, &c., were impaired in goodness and advanced in price by monopolies.
"	'21	1	5	9½	1643. An excise first laid on beer, wines, and other commodities in England. Church lands sold at ten and eleven years' purchase.
"	'22	2	7	1	1644. Parliament commanded every family to retrench one meal per week, and pay the value to the State to meet expenses of civil war.
"	'23	2	5	7½	
War	'24	1	18	6½	
"	'25	2	1	2	
"	'26	1	19	5	
"	'27	1	10	6	
"	'28	1	5	5½	
"	'29	1	14	8	
"	'30	2	6	2½	
Peace	'31	2	12	2	
"	'32	2	2	4½	
"	'33	2	3	10½	
"	'34	2	5	3	
"	'35	2	2	1	
"	'36	2	3	10	
"	'37	2	3	3½	
"	'38	2	7	1½	
"	'39	1	15	7	
War	'40	1	16	2	
"	'41	2	—	3½	
Peace	'42	1	13	9½	
Civil war	'43	2	—	3½	
"	'44	1	13	2	
"	'45	1	18	7½	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Civil war	1646	2	2	8	1646. The table of the price of wheat compiled by Bishop Fleetwood begins at this date, and differs materially from the figures here given.
"	'47	3	5	5 $\frac{3}{4}$	We do not use Fleetwood's table. He took the mean of the price for the two halves of each year.
"	'48	3	15	6 $\frac{3}{4}$	1647. Nearly one-half of the land of the kingdom confiscated by Parliament. Cultivation stopped in consequence.
"	'49	3	11	1 $\frac{1}{4}$	1649. The Commonwealth proclaimed. Interest of money 6 per cent.
"	'50	3	8	1 $\frac{1}{2}$	1660. <i>Importation</i> of grain allowed on payment of certain duties regulated by price, but without bounty. First "sliding scale" of duties.
"	'51	3	5	2 $\frac{1}{4}$	Charles II began to reign.
"	'52	2	4	—	1661. The Courts of Wards and Liveries were now abolished.
"	'53	1	11	6 $\frac{1}{4}$	1663. By 15 Charles II, cap. 7, the high duties on <i>exportation</i> of grain were repealed. Cattle might be imported from Isle of Man.
"	'54	1	3	1 $\frac{1}{2}$	1663. The amount of the annual revenue was over 1,100,000 <i>l.</i>
Peace	'55	1	9	7 $\frac{1}{2}$	1664. The price of land was now very low; it had fallen out of cultivation during the civil wars.
War	'56	1	18	2 $\frac{3}{4}$	1665. The wheaten peck-loaf now sold for 2 <i>s.</i> 5 $\frac{1}{2}$ <i>d.</i> ; the white peck-loaf for 3 <i>s.</i> 7 $\frac{3}{4}$ <i>d.</i>
"	'57	2	1	5 $\frac{1}{4}$	1666. The <i>importation</i> of Irish cattle prohibited.
"	'58	2	17	9 $\frac{1}{4}$	1669. The lord mayor and court of aldermen order an assize of bread of the best sort of wheaten meal usually brought to Queenhithe market.
"	'59	2	18	8	1670. The measure of grain to be made uniform in all parts of England—22 Charles II, cap. 8. By 22 Charles II, cap. 13, the <i>export</i> of corn permitted when higher prices prevailed than those permitted by Act of 1663, but with higher customs duty.
Peace	'60	2	10	2 $\frac{3}{4}$	1674. Interest of money 8 per cent.
"	'61	3	2	2 $\frac{3}{4}$	1685. James II began to reign.
"	'62	3	5	9 $\frac{1}{4}$	By 1 James II, cap. 19, regulations made for ascertaining price of grain.
"	'63	2	10	8	1688. By 1 William and Mary, cap. 12, all <i>exportation</i> duties were abolished, and a <i>bounty</i> offered by way of encouragement. This was an entire change of policy.
"	'63	2	4	4	1689. William III (of the united Houses of Stuart and Nassau) ascended the throne.
"	'64	1	16	—	1691. The "monied interests" took their rise from the system of national finance pursued at this period, viz., "the banking system."
War	'65	2	3	10 $\frac{1}{4}$	1692. A land-tax of 4 <i>s.</i> in the pound imposed. Interest of money 7 per cent.
"	'66	1	12	—	1695. Many of the inhabitants of <i>Scotland</i> were driven to migrate to Ireland from the excessive price of bread.
"	'67	1	12	—	
"	'68	1	15	6 $\frac{3}{4}$	
Peace	'69	1	19	5	
"	'70	1	17	— $\frac{1}{2}$	
"	'71	1	17	4	
War	'72	1	16	5 $\frac{1}{4}$	
"	'73	2	1	5 $\frac{1}{2}$	
Peace	'74	3	1	— $\frac{1}{2}$	
"	'75	2	17	5 $\frac{1}{4}$	
"	'76	1	13	9 $\frac{1}{4}$	
"	'77	1	17	4	
"	'78	2	12	5 $\frac{1}{4}$	
"	'79	2	13	4	
"	'80	2	—	—	
"	'81	2	1	5 $\frac{3}{4}$	
"	'82	1	19	1 $\frac{1}{4}$	
"	'83	1	15	6 $\frac{3}{4}$	
"	'84	1	19	1 $\frac{3}{4}$	
"	'85	2	1	5 $\frac{3}{4}$	
"	'86	1	10	2 $\frac{3}{4}$	
"	'87	1	2	4 $\frac{1}{2}$	
"	'88	2	—	10 $\frac{1}{4}$	
"	'89	1	6	8	
"	'90	1	10	9 $\frac{3}{4}$	
War	'91	1	10	2 $\frac{3}{4}$	
"	'92	2	1	5 $\frac{1}{2}$	
"	'93	3	—	1 $\frac{1}{4}$	
"	'94	2	16	10 $\frac{3}{4}$	
"	'95	2	7	1 $\frac{1}{4}$	
"	'96	3	3	1 $\frac{1}{4}$	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
War	1697	2 13 4	1697. An excise of 6d. per bushel was laid on malt.
Peace	'98	3 - 9	1698. Great complaints of the dearth of provisions and the decay of trade.
"	'99	2 16 10 $\frac{3}{4}$	The export of grain and breadstuffs <i>prohibited</i> for one year. Bounty suspended for one year.
"	1700	1 15 6 $\frac{3}{4}$	1700. All customs and duties on export of grain abolished by 11 and 12 William III, cap. 20.
War	'01	1 13 5 $\frac{3}{4}$	1701. Government rate of interest 6 per cent.
"	'02	1 6 2 $\frac{3}{4}$	Sea coals 1l. 4s. per chaldron.
"	'03	1 12 -	1702. Anne began to reign.
"	'04	2 1 4	1703. By Act of the Parliament of <i>Scotland</i> , all importation of grain from <i>Ireland</i> was prohibited.
"	'05	1 6 8	About this period England was blessed with great plenty.
"	'06	1 3 1 $\frac{1}{4}$	1709. By 8 Anne, cap. 2, all export of grain and spirit produced from grain prohibited; but might be renewed on proclamation. This year another Act was passed to regulate the assize of bread.
"	'07	1 5 4	The queen in her speech to parliament complained of corn being exported at such high prices as distressed the poor.
"	'08	1 16 10 $\frac{3}{4}$	1711. A duty laid on hops of 1d. per pound.
"	'09	3 9 9 $\frac{1}{4}$	1714. George I (first of the House of Brunswick) ascended the English throne. The national debt about 40,000,000l.; the legal interest 5 per cent.
"	'10	3 9 4	1720. The South Sea Bubble exploded, beggaring the nation for a time.
"	'11	2 8 -	1722. The number of <i>houses</i> within the bills of mortality 22,639.
"	'12	2 1 2 $\frac{1}{4}$	1724. At <i>Easter</i> , beef, mutton, veal, and pork 1 $\frac{3}{4}$ d. per pound.
Peace	'13	2 5 4	1725. The national rate of interest 5 per cent.
"	'14	2 4 9	1727. George II began to reign. Excess of <i>exportation</i> led to the plundering of the granaries in the west of England.
Civil war	'15	1 18 2 $\frac{3}{4}$	1728. The price of <i>imported</i> grain settled by Act of Parliament.
"	'16	2 2 8	1729. By 2 George II, cap. 18, powers were given to Justices of the Peace to ascertain price of grain.
"	'17	2 - 7 $\frac{1}{4}$	1732. Further powers given for ascertaining price of English grain.
"	'18	1 14 6 $\frac{1}{4}$	1736. The <i>French</i> were reported to use their public granaries for the good of their poorer operative classes. They bought when grain was cheap, and sold to these at reasonable prices when grain was dear.
"	'19	1 11 1 $\frac{1}{4}$	1737. Interest of money from 3 to 5 per cent.
"	'20	1 12 10 $\frac{3}{4}$	1738. By 2 George II, cap. 22, interfering to prevent export of grain made a felony. The "Hundred" made liable for grain destroyed.
"	'21	1 13 4	
"	'22	1 12 -	
"	'23	1 10 10	
"	'24	1 12 10 $\frac{3}{4}$	
"	'25	2 3 1 $\frac{1}{4}$	
"	'26	2 - 10 $\frac{3}{4}$	
"	'27	1 17 4	
"	'28	2 8 5 $\frac{1}{4}$	
"	'29	2 1 7 $\frac{1}{2}$	
"	'30	1 12 5 $\frac{1}{4}$	
Peace	'31	1 9 2 $\frac{1}{2}$	
"	'32	1 3 8 $\frac{1}{2}$	
"	'33	1 5 2 $\frac{1}{4}$	
"	'34	1 14 6 $\frac{1}{2}$	
"	'35	1 18 2 $\frac{3}{4}$	
"	'36	1 15 10 $\frac{1}{4}$	
"	'37	1 13 9 $\frac{1}{4}$	
"	'38	1 11 6 $\frac{3}{4}$	
War	'39	1 14 2 $\frac{3}{4}$	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
War	1740	2	5	1½	1740. The king in opening the session of Parliament, recommended the House to consider of some proper regulations for <i>preventing the export</i> of grain.
"	'41	2	1	5¾	
"	'42	1	10	2¾	1741. Importation of grain from <i>Ireland</i> and elsewhere into <i>Scotland</i> permitted.
"	'43	1	2	1	<i>Exportation</i> prohibited for one year. Butter in Bedford Market 3½d. to 4d. per pound.
"	'44	1	2	1	1746. Exportation of grain to <i>France</i> allowed for a certain limited time (but of large amount), notwithstanding the war.
"	'45	1	4	5¼	1747. The French contract for 400,000 quarters of wheat.
"	'46	1	14	8	1749. Mr. Pelham drew attention in the House of Commons to the very large sums paid for bounty on exported corn during the past three years.
"	'47	1	10	11½	
Peace	'48	1	12	10¾	1750. The wheat exported this year amounted to 947,000 quarters, and the total bounties paid during the ten years from 1740 to 1751 reached the sum of 1,575,000 <i>l.</i> —McCULLOCH.
"	'49	1	12	10¾	
"	'50	1	8	10¾	1751. An Act for ascertaining quantities of grain exported for which bounty was payable.
"	'51	1	14	2¾	1753. The Exchequer bankrupt, and unable to pay the bounties on exportation of grain otherwise than by debentures.
"	'52	1	17	2½	1756. The king expressed in parliament his concern for the poor in consequence of the scarcity of provisions. Many disturbances. <i>Exportation</i> prohibited after end of year, and <i>all duties on corn imported repealed</i> .
"	'53	1	19	8½	
"	'54	1	10	9¾	
War	'55	1	10	1	1757. Act to regulate making bread, and holding assise thereof.
"	'56	2	—	1¾	Importation of grain <i>duty free</i> until 27th August. Laws against forestallers and regrators enforced. English distilling stopped.
"	'57	2	13	4	1758. Great crop but unfavourable harvest.
"	'58	2	4	5¼	1759. Exportation of grain prohibited till December. The Norfolk farmers and the grand jury of that county petition to be allowed to export.
"	'59	1	15	3	1760. George III began to reign; an additional duty of 3 <i>d.</i> laid on malt, making duty 6 <i>s.</i>
"	'60	1	12	5¼	1761. An additional duty of 3 <i>s.</i> per barrel on strong beer, making total duty 8 <i>s.</i> per barrel.
"	'61	1	6	9¾	1762. New Act, 3 George III, cap. 11, as to assise of bread.
"	'62	1	14	8	1763. Agriculture in <i>Scotland</i> greatly improved; land about Edinburgh selling at thirty-two years' purchase.
"	'63	1	16	1¾	1764. A Parliamentary Committee was appointed to inquire into the causes of the then high price of provisions.
"	'64	2	1	5¾	The king reminds parliament of the high price of grain consequent upon exportation.

TABLE XIV.—The Price of Wheat in England and Wales—Contd.

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
War	1765	2 8 —	1765. First trustworthy estimate of national consumption of grain made.
"	'66	2 3 1 $\frac{1}{4}$	1767. Sir James Steuart's famous work on Political Economy published.
"	'67	2 17 4	1770. Act for registering prices of corn.
"	'68	2 13 9 $\frac{1}{4}$	1771. From this date we quote from <i>Willick's</i> annual average prices per imperial quarter.
Peace	'69	2 — 7	These differ materially from the Eton prices.
"	'70	2 3 6 $\frac{3}{4}$	The exportation of live cattle was this year prohibited. See Table X.
"	'71	2 8 7	1773. By 13 George III, cap. 20, all importation was stopped when price of wheat was 44s. per quarter. Prices also fixed as to other grain.
"	'72	2 12 3	New Act as to assise and making of bread.
"	'73	2 12 7	1781. Further Act, 21 George III, cap. 50, for ascertaining price of grain.
"	'74	2 14 3	1789. Further Act as to ascertaining price of grain.
War	'75	2 9 10	1791. New Act, 31 George III, cap. 30, for regulating importation and exportation of grain; very high duty levied upon grain imported when the home price not above 50s. per quarter.
"	'76	1 19 4	1792. From this date inclusive the account of Eton College has been kept according to the bushel of 8 gallons, under the provisions of 31 George III, cap. 30, sec. 82.
"	'77	2 6 11	1796. The new experiment of <i>Bounty</i> for import of grain was inaugurated. Repealed same year. The consumption was stated by Lord Hawkesbury to be 500,000 quarters per month, or 6,000,000 quarters per annum, of which 180,000 were imported. The value of imported grain this year was 4,360,000 <i>l.</i>
"	'78	2 3 3	1797. New Act for assise and making of bread in London.
"	'79	1 14 8	1799. A Bill was before Parliament at the instance of the Corporation of London, seeking new powers as to assize of bread.
"	'80	1 16 9	1800. The average growth of grain in Great Britain was estimated by Chalmers to be 30,549,516 quarters.
"	'81	1 6 —	1801. The value of imported grain this year reached 11,600,000 <i>l.</i>
"	'82	2 9 3	1804. Foreign grain to be admitted at 6 <i>d.</i> per quarter when English wheat was 66 <i>s.</i> and upwards; very high duties when prices under this.—44 George III, cap. 109.
"	'83	2 14 3	1806. Free interchange of grain with <i>Ireland</i> permitted.
Peace	'84	2 10 4	1808. Exports exceeded imports in consequence of supplies sent to British armies in Spain and Portugal.
"	'85	2 3 1	
"	'86	2 — —	
"	'87	2 2 5 $\frac{1}{4}$	
"	'88	2 6 4	
"	'89	2 12 9	
"	'90	2 14 9	
"	'91	2 8 7	
"	'92	2 3 —	
War	'93	2 19 3	
"	'94	2 12 3	
"	'95	3 15 2	
"	'96	3 18 7	
"	'97	2 13 9	
"	'98	2 11 10	
"	'99	3 9 —	
"	1800	5 13 10	
"	'01	5 19 6	
Peace	'02	3 9 10	
War	'03	2 18 10	
"	'04	3 2 3	
"	'05	4 9 9	
"	'06	3 19 1	
"	'07	3 15 4	
"	'08	4 1 4	
"	'09	4 17 4	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.	Notes, Explanatory, &c.
		£ s. d.	
War	1810	5 6 5	1810. Large importations of grain from France, notwithstanding that we were at war with her.
"	'11	4 15 3	Estimated value of all grain imported 7,800,000 <i>l</i> .
"	'12	6 6 2	1814. According to Colquhoun, the consumption of corn in <i>Great Britain</i> and <i>Ireland</i> this year amounted to about 35,000,000 quarters. Value of imported grain 2,815,319 <i>l</i> .
"	'13	5 9 9	
"	'14	3 14 4	
"	'15	3 5 7	
Peace	'16	3 18 6	1815. No foreign corn to be admitted until English wheat was 8 <i>s</i> . or more per quarter. Colonial admitted when price reached 67 <i>s</i> ., 55 George III, cap. 26.
"	'17	4 16 11	
"	'18	4 6 3	
"	'19	3 14 6	
"	'20	3 7 10	
"	'21	2 16 1	1818. The wheat consumed in Great Britain was estimated by Mr. Wm. Jacob, F.R.S., at 12,000,000 quarters. Value of grain imports 7,908,140 <i>l</i> .
"	'22	2 4 7	1820. George IV ascended the throne.
"	'23	2 13 4	1821. New Act, 1 and 2 George IV cap. 87, for importation and exportation of grain.
"	'24	3 3 11	1822. Corn Law Amendment Act, admitting foreign wheat at 12 <i>s</i> . per quarter duty when price was 7 <i>s</i> ., and 1 <i>s</i> . duty when it was 8 <i>s</i> . and upwards. New Act to regulate making and sale of bread in London.
"	'25	3 8 6	
"	'26	2 18 8	1825. American colonial wheat admitted at a permanent duty of 5 <i>s</i> . per quarter. Duty of 14 <i>s</i> . per quarter on buckwheat.
"	'27	2 18 6	1826. Foreign grain admitted at nominal duty, temporary.—7 and 8 George IV, cap. 3.
"	'28	3 — 5	1827. The highest duties ever imposed upon the importation of grain into Great Britain enacted this year. See supplement to Table X.
"	'29	3 6 3	1828. Corn Law Amendment Act, with new sliding scale adopted.
"	'30	3 4 3	1830. William IV began to reign.
"	'31	3 6 4	1835. Act to regulate the importation of grain into Isle of Man.
"	'32	2 18 8	1836. New Act as to making and sale of bread in London; first modern measure against adulteration.—6 and 7 William IV, cap. 37.
"	'33	2 12 11	1837. Victoria ascended the throne.
"	'34	2 6 2	1838. Act as to making and sale of bread in <i>Ireland</i> .
"	'35	1 19 4	1842. Corn Law Amendment Act.—5 and 6 Vict. cap. 14. "Reduced sliding scale."
"	'36	2 8 6	1846. Repeal of corn laws. Duty of 1 <i>s</i> . per quarter continued until 1869. Wheat sold at Uxbridge market on last day of year at 88 <i>s</i> . per quarter.
"	'37	2 15 10	1847. The potato failure in Ireland and parts of Great Britain. The corn and navigation laws suspended.
"	'38	3 4 7	1851. The <i>Lancet</i> Analytical Commission appointed.
"	'39	3 10 8	1855. Reports of <i>Lancet</i> Commission published.
"	'40	3 6 4	
"	'41	3 4 4	
"	'42	2 17 3	
"	'43	2 10 1	
"	'44	2 11 3	
"	'45	2 10 10	
"	'46	2 14 8	
"	'47	3 19 9	
"	'48	2 10 6	
"	'49	2 — 3	
"	'50	2 0 3	
"	'51	1 18 6	
"	'52	2 — 9	
"	'53	2 13 3	
War	'54	3 12 5	
"	'55	3 14 8	
Peace	'56	3 9 2	
"	'57	2 16 4	

TABLE XIV.—*The Price of Wheat in England and Wales—Contd.*

Peace or War.	Year.	Price of Wheat per Quarter, Winchester Measure.			Notes, Explanatory, &c.
		£	s.	d.	
Peace	1858	2	4	2	1858. The English wheat crop for this year the finest on record ; but crops deficient abroad.
"	'59	2	3	9	1860. The English wheat crop the finest for twenty-five years. A general Act for preventing adulteration of food and drinks.—23 and 24 Victoria, cap. 84.
"	'60	2	13	3	1861. Value of imported grain 34,918,639 <i>l</i> .
"	'61	2	15	4	1862. Cotton famine. Value of imported grain 37,772,194 <i>l</i> .
"	'62	2	15	5	1863. Act for regulation of bakehouses, and another Act for seizure of diseased and unwholesome meat. Value of imported grain 25,955,939 <i>l</i> .
"	'63	2	4	9	1866. Professor Rogers's <i>History of Agriculture and Prices</i> published, from which we have drawn some of the details for this table.
"	'64	2	—	2	1868. Act to regulate sale of poisons.
"	'65	2	1	—	1869. Last trace of corn laws abolished from the Statute Book by repeal of the 1 <i>s</i> . duty left in 1846.—32 Victoria, cap. 14. Adulteration Acts extended to seeds.
"	'66	2	9	11	1872. Amendment and extension of law regarding adulteration of food.—35 and 36 Victoria, cap. 74.
"	'67	3	4	5	1875. The imports of grain into the United Kingdom in the year ending 31st August reached 25,001,590 quarters.
"	'68	3	4	—	
"	'69	2	8	3	
"	'70	2	6	9	
"	'71	2	16	8	
"	'72	2	17	—	
"	'73	2	18	8	
"	'74	2	15	9	
"	'75	2	5	2	
"	'76	2	6	2	

Note.—I have found it exceedingly difficult at certain periods to determine as to a state of peace, of war, or to ascertain when civil wars terminated. The figures in the first column of the table must therefore be taken as subject to correction.

Famine Literature.

The following table of Famine Literature is a necessary sequel to all that has preceded. It indicates the periods—since the invention of printing—wherein famine topics have been uppermost in public attention ; and it furnishes an intimation of the works wherein the famine history of those periods will be found. I only trust it may turn out to be reasonably complete: certainly no efforts have been spared to make it so. In McCulloch's *Literature of Political Economy* some detailed information and criticisms upon some of the more prominent authors mentioned will be found.

TABLE XV.—*The Literature of Famines and of the Corn Laws, &c.*

A.D.	
1496	12 Henry VII. The Assize of Bread; printed on vellum, with woodcuts, set forth and printed at the request of Mich. English and Jo. Rudestone, alderman.
1542	Assize of Bread and Ale, after the Pryse of a Quarter of Wheat, with the Weight of Butter and Cheese, and the Measure of all manner of Wood and Cole, and Lath, Bourde, and Tymbre. 4to. Printed by R. Wyer. There was, we believe, an earlier edition without date, and many later editions, the last being published in 1700 by H. Jackson.
'84	John Uddall: The true Remedie against Famine and Warres; five Sermons upon the first chapter of the Prophecie of Joel.
'86	Printed by Christopher Barker: Orders devised by the Especial Commandant of the Queene's Majestie for the Reliefe and Staie of the present Dearth of Graine within the Realme.
'93	By the same: The Renewing of certaine Orders devised by the speciall Commandements of the Queene's Majestie for the Reliefs and Stay of the present Dearth of Grain within the Realme: in the yeere of our Lord 1586; now to be again executed this year 1594, upon like occasions as were seene the formere yere: with an addition of some other particular Orders for Reformation of the great abuses in ale-houses, and such like.
'95	Jerom Benzoni (Venice): Tractatus de Fugâ, in quo explicatur quid Principes et Rectores Ecclesiastici et civiles debeant agere, tempore pestis, famis, et belli. 4to.
'96	Dr. William Barlow (Bishop of Rochester and Lincoln): Translation of three Sermons on Famine and Dearth of Victuals, by Lavater L. Same year, by — Plates: Sundrie new artificial Remedies against Famine.
'97	Peter Baker (probably a sermon): The Prophecy of Agabus, concerning Famine.
1611	Arthur Standish: The Commons Complaint concerning the Waste of Woods, and the Dearth of Victuals; with four remedies for the same.
'27	Rev. Wm. Gouge: God's three Arrows, Plague, Famine, and Sword.
'30	Orders appointed by His Majestie (James I) to be straitly observed for the preventing and remedying of the Dearth of Graine and Victual. 4to. Black letter.
'31	Edward Howe: A Collection of the most remarkable Dearth and Famines.
'33	A Decree lately made in the High Court of Starre Chamber (touching Ingrossing: Taverners shall not sell Victual; Bakers not sell sixteen to the dozen; no Ordinary shall exceed 2s. per meal; regulating the Price of Horsemeat; Suppressing Pettie Ostries, &c.). 4to.
'36	The Assize of Bread, together with Sundry Good and Needful Ordinances for Bakers, Brewers, Innholders, Victuallers, Vintners, and Butchers, and also other Assises in Weights and Measures, observed within the Liberties and without. 4to. Black letter. Interesting woodcuts.
'38	There was published by John Penkethman: Artachthos, or a new Book declaring the Assize of Bread by Troy and Avoirdupois Weights, containing divers Orders and Articles made and set forth by the Right Hon. the Lords and others of His Majesty's Hon. Privy Council. Whereunto are added other necessary tables. London: R. Bishop, 1638. 4to. [This work is not mentioned by Watts or Allibone, nor in the 1st edition of Lowndes; but in the second edition it is mentioned at p. 1821 (see 1748).]
'43	Thomas Nutt: Nineteen Propositions for the Deliverance of City and Country from fear of Sword and Famine.
'53	Bread for the Poor, and Advancement of the English Nation Promised by Enclosure of the Wastes and Common Grounds of England.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1653	By Adam Moore, Gent. London, 4to. "One of the earliest tracts in favour of the division and enclosure of commons and wastes. It is written with considerable talent."—McCulloch.
'54	Rice Evans, "a Welsh conjurer:" Mr. Evans's and Mr. Pennington's Prophesie concerning seven years of Plenty and seven years of Famine and Pestilence.
'55	Dr. Christopher Bennett edited a work originally written by Thomas Moffatt: <i>Health's Improvement; or Rules comprising or discovering the Nature, Method, and Manner of Preparing all Sorts of Food used in this Nation.</i>
'77	<i>England's Improvement by Sea and Land: to outdo the Dutch without fighting, to pay Debts without Moneys, to set to work all the Poor of England with the Growth of our own Lands, to prevent unnecessary Suits in Law, with the benefit of a Voluntary Register; directions where vast quantities of Timber are to be had for the Building of Ships; with the advantage of making the Great Rivers of England Navigable; Rules to prevent Fires in London, and other great Cities; with directions how the several Companies of Handicraftmen in London may always have cheap Bread and Drink.</i> By Andrew Yarranton, gentleman. (Tract, 4to., pp. 198.) The last of his several schemes concerns us most here. His method was by means of Bank Granaries (p. 150), where the grain was to be stored for 1 <i>d.</i> per bushel per annum, and against the produce so stored advances were to be made to the owners as required up to within a certain margin. The grain would always be kept within reach. The scheme was very ingenious, like all the projects of this author.
1707	Dr. Fleetwood, Bishop of Ely, published <i>Chronicum Preciosum: an Account of Money, Price of Corn, Wages, &c., in England, for six hundred Years last past.</i> Second edition, 1745. McCulloch said this work contained the best account of prices published in England previously to that given by Sir F. M. Eden— <i>Literature of Political Economy.</i> There was for many yeas published a broadside, <i>An Account of the True Market Price of Wheat and Malt at Windsor for One Hundred Years</i> , by William Fleetwood, Bishop of Ely.
'11	The Rev. John Hildrop: <i>A Treatise of the three Evils of the last Times, the Sword, the Pestilence, and the Famine.</i>
'14	There was published <i>Assise of Bread and other Assises: Weights and Measures to be observed by Bakers, Vintners, Brewers, &c.</i> 4to. Woodcuts.
'28	<i>Husbandry and Trade Improved; being a Collection of many valuable Materials relating to Corn, Cattle, Coal, Hops, Wool, &c.</i> By John Houghton, F.R.S. Second Edition. 4 vols., 8vo. A valuable collection of facts and opinions.
'48	The Book of John Penkethman, first published 1638, was reprinted this year, with a double title page, the first of which is as follows:— <i>A Collection of several Authentic Accounts of the History and Price of Wheat, Bread, Malt, &c., from the coming in of William the Conqueror to Michaelmas, 1745, with some occasional remarks.</i> The second title page:— <i>A True Relation or Collection of the most remarkable Dearth and Famines which have happened within this Realme since the coming in of William the Conqueror to Michaelmas, 1745.</i> As also the Rising and Falling of the Price of Wheat and other Grain from time to time, with the several occasions thereof briefly set down. London: Printed for W. Warden, and sold by C. Davis, over against Gray's Inn Gate, Holbourn, 1748. New edition, 1765.

After reciting many of the incidents already quoted in the preceding tables, he sums up, "By all these monumental verities, or particular narrations of chronicled occurrences, it appears that the cause of a dearth or famine is manifold."

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

- A.D.
1748
- "1. Warre, whereby both corne and land was wasted, as also people destroyed.
 "2. Unseasonable weather, extremitie of cold and frost, or raine, of windes, thunder and lightning, tempests, and such like.
 "3. The abasing of the coine.
 "4. Excessive consumption and abuse of wheat and other victuals in voluptuous feasts.
 "5. The uncharitable greediness, or unconscionable hording of corne-masters and farmers.
 "6. The merchants over-much transporting of graine into forreine parts.
 "For a seventh cause, I might here inferre, with accusation, the evil disposition of many in racking of rents, whereby the tenants are moved, if not constrained, to set on their commodities an unreasonable price."
 He adds, "Againe, on the other side, there are divers apparent causes of cheapness and plentie.
 "1. Peace, whereby men have libertie to till the ground and reap the fruit thereof.
 "2. Seasonable and kindly weather, with a fruitful harvest.
 "3. Great store of fine gold and silver.
 "4. The moderate use of the creature and sparing dyet, which is very little practised.
 "5. The corne-masters and farmers charitable bountie, or conscionable exposing of their graine to sale, which is *rara avis in terris*, &c.
 "6. The importation of graine from foreine parts, which have beene divers times knowne, through the careful means of the provident magistrates within the citie of London.
 "For a seventh cause, I might adde the forbearance of racking rents, whereby the tenants (farming their grounds at easie rates), and other provision at reasonable prices. But so corrupt or prone to avarice is the heart of man in these later times, that racking of rents will never be abandoned, and consequently cheapness of graine, or other things created for the sustenance or service of man, is not likely to be knowne by any such cause," p. 74.
- '49 Dr. Thomas Short, M.D., *General Chronological History of the Air, Weather, Seasons, Meteors, &c.*, in sundry places at different times, wherein he reviews the famines and dearths which have afflicted the world. He remarks [vol. ii, p. 376] that among the signs of an approaching dearth are several years of luxuriant crops in succession.
- '50 A letter from a gentleman in town to his friend in the country, recommending the necessity of frugality. Third edition, 8vo., pp. 24.
- '57 A letter to the Right Honourable William Pitt, Esq., one of His Majesty's Principal Secretaries of State, relating to the abuses practised by Bakers, Corndealers, Farmers and Millers: in consequence of a pamphlet, intituled, *Poison Detected*, which that fraternity is supposed to have endeavoured to suppress. 8vo., pp. 23.
- '58 There was compiled [by Sir Charles Whitworth, M.P.] an inquiry into the prices of Wheat, Malt, and occasionally of other provisions; of Land, Cattle, &c.; as sold in England from the year 1000 to the year 1765; computed according to the Winchester measure, and to the present standard of English corn. Divided into periods of ten years each, and also into periods of circumstances. Printed for and sold by T. Longman (at No. 39), in Paternoster-row, M.DCC.LXVIII.
- '58 Copy of the report of an Assize of Bread made in the year 1669, by order of the then court of Aldermen, with remarks on the Act 31 George II, and an appendix to explain the statute 51 Henry III.
- '63 Charles Churchill, "an English poet of unquestionable genius:" The *Prophecy of Famine*, a Scots Pastoral.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1765 ...	Davis : authentic accounts of the price of Wheat, Bread and Malt, &c. ; and also a true relation of Dearth and Famines.
'65 ...	Scarcity of Bread : a plan for reducing its high price. By William Frend.
'66 ...	Poor Man's Prayer : an elegy addressed to the Earl of Chatham (complaining of the exportation of corn). By Simon Hodge, a Kentish labourer. 4to.
'66 ...	Three letters to a member of the honourable House of Commons, from a country farmer, concerning the price of provisions ; and pointing out a sure method of preventing future scarcity. 8vo. pp. 49.
'67 ...	Sir James Steuart's famous work : <i>An Inquiry into the Principles of Political Economy</i> [produced, it will be remembered, before Adam Smith's <i>Wealth of Nations</i>], wherein he lays down this fundamental proposition (afterwards exaggerated and misapplied by Malthus): 1. The production of all countries are, generally speaking, in proportion to the number of their inhabitants ; and 2. The inhabitants are most commonly in proportion to the food. He then shows that the food of the earth may be divided into two portions : (A) the natural produce of the earth ; and (B) the portion which is created by human industry. A corresponds to the food of animals, and is the limit of the number of savages. B is the product of industry, and increases (all other things being equal) in proportion to the numbers of civilised men.
'67 ...	Thoughts on the causes and consequences of the present high price of Provisions. [By Soane Jennings], Second edition. 8vo., pp. 26.
'67 ...	An Appeal to the Public : or Considerations on the Dearthness of Corn, wherein the vulgar ideas are exposed ; the mistakes of some writers discovered ; the Pretended and True Causes examined ; the best Preventives Elucidated ; with some observations offered, tending to promote the Public Tranquillity ; and the case of other provisions is occasionally considered. 8vo., pp. 59.
'67 ...	The Occasion of the Dearthness of Provisions, and the distress of the Poor : with proposals for remedying the calamity, offered to the consideration of the public : wherein the policy of the bounty given upon the exportation of Corn, the enclosing of Commons, and Enlarging of Farms, are impartially considered. With some remarks on a late pamphlet, intituled, <i>A Letter to a member of Parliament on the Present Distress of the Poor</i> . By a manufacturer [W. John Hustler, of Bradford, Yorks]. 8vo., pp. 49.
'67 ...	Political Speculations ; or an attempt to discover the causes of the Dearthness of Provisions and High Price of Labour in England : with some Hints for remedying those evils. Part II. 8vo., pp. 62.
'67 ...	In Dr. Thomas Short's <i>Comparative History of the Increase and Decrease of Mankind, &c.</i> , published this year, there was included "a Syllabus of the general States of Health, Air, Seasons, and Food for the last three hundred years ; and also a Meteorological Discourse."
'67 ...	Thoughts on the Causes and Consequences of the present High Price of Provisions. This work is attributed to Edmund Burke. Important considerations upon the Act of the 21 George II, relative to the Assise of Bread. 8vo., pp. 46. London : printed for G. Woodfall, the corner of Craig's Court, Charing Cross. Price 1s. Second edition, with additions, same year.
'68 ...	Assise of Bread. Important considerations upon the Act relative to the assise of bread. Inquiry into the Prices of Wheat, Malt, and occasionally of other Provisions, of Land and Cattle, &c., as sold in England from the year 1000 to the year 1765. By Sir Charles Whitworth, M.P.
'72 ...	A letter to the Right Hon. Lord North ; attempting to show the Causes and the Remedies of the High Price of Provisions, upon a new plan. By Amiens Patriæ. 8vo., pp. 32.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.

1772

A sketch of a plan for reducing the present High Price of Corn and other Provisions, and for securing plenty of both for the time to come. In a letter to a member of parliament. By Pamphilus. 8vo., pp. 27.

T. Elbridge Rooke, "late Lieutenant in your Majesty's reduced 108th Regiment of Foot," addressed to the king, "Some Considerations on the present Scarcity and Dearthness of Provisions." Small 4to., pp. 24; wherein occur the following passages:—

"The cause of the dearthness of provisions, undoubtedly proceeds from too great a number of horses, still-houses, a prohibition of the distillery of wheat, too general a use of tea, the monopoly of farms, the goodness of the roads, and the numerous dealers in provisions.

"In this treatise we shall endeavour to prove evidently that these are the causes, and the only causes, of the present dearthness of meat; likewise a suitable and effectual remedy is proposed to reduce the price thereof to a moderate proportion, and also that of hides, tallow, soap, candles, and leather.

"It is not intended to stop the raisers and dealers in these articles, they shall get as much as they do now, with a less sum of money in trade; neither will it prove detrimental to the landed interest, but it will essentially add to the strength and glory of the nation."

The chief peculiarity of this writer is that his proposed remedies are nearly the reverse of those of all other writers. His *panacea* was the importation of grain from British America, paying a duty of *one penny* per bushel!

'72

The Expediency of a Free Exportation of Corn, with some Observations on the Bounty. [By Arthur Young.] London, 8vo.

'73

Considerations on the exorbitant price of Provisions: setting forth the pernicious effects which a real scarcity of the necessaries of life must eventually have upon the commerce, population, and power of Great Britain. To which is added a plan to remove the cause of our present national distress. Humbly submitted to the candid and impartial public. By Francis Moore. 8vo., pp. 98. One of his ideas was to substitute ox labour for that of horses. Horses eat, but are not eaten [in England].

The great advantage of eating pure and genuine Bread, comprehending the heart of the wheat, with all its flour. Showing how this may be a means of promoting health and plenty, preserving infants from the grave by destroying the temptation to the use of alum and other ingredients in our present wheaten bread. Recommending to magistrates, particularly in London, such an impartial distribution of justice in the executing the Act regulating the assise of standard wheaten bread, as may prove equally beneficent to the miller, the baker, and the consumer of bread. By an Advocate for Trade. 8vo., pp. 59.

A letter on occasion of the public inquiry concerning the most fit and proper bread to be assised for general use. Showing the difficulty of executing the Act of the 31 George II, in a beneficent manner to the poor; the constant usage and custom with regard to Bread for many centuries; the folly of eating bread known to be made white by art and adulteration, and the great advantage of eating pure bread made of all the flour, including the heart of the wheat, as the most salutary, agreeable and nutritive aliment. Recommended as an object of a very serious and important nature. By an Advocate for Public Welfare. 12mo., pp. 74.

An inquiry into the connexion between the present price of provisions and the size of farms: with remarks on population as affected thereby. To which is added two proposals for preventing future scarcity. By a Farmer. 8vo., pp. 146.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1776	Three Letters to a Member of the Honourable House of Commons, from a Country Farmer, concerning the Prices of Provisions, and pointing out a sure method of preventing future scarcity. Humbly inscribed to Parliament. Two Letters on the Flour Trade and Dearthness of Corn; wherein the former is vindicated and the Cause of the latter explained, and the mistakes and misrepresentations of ignorant and merely theoretical writers are confuted. By a Person in Business (in Hants, 1st November, 1766). 8vo.
'77	An Inquiry into the Nature of the Corn Laws, with a View to the New Corn Bill proposed for Scotland. [By Sir James Anderson, LL.D.] Edinburgh, 8vo.
'85	A Political Inquiry into the consequences of Enclosing Waste Lands, and the Causes of the High Price of Butchers' Meat; being the sentiments of the Society of Farmers.
'90	By Robert Applegarth. A Plea for the Poor; or Remarks on the Price of Provisions, &c.; the Peasant's Labour; the Bounties allowed on the Exportation of Corn, especially Wheat; with Proposals for their Emendation.
'90	Representation of the lords of the committee of council appointed for the consideration of all matters relating to trade and foreign plantations, upon the present state of the laws for regulating the importation and exportation of corn. London, 4to. "In consequence of the statements and suggestions made in this representation, a change, though of no great moment, was effected in the corn laws in the course of the ensuing year."—McCULLOCH.
'91	Lord Sheffield. Observations on the Corn Bill now depending in Parliament.
'92	Considerations on the Causes of the High Price of Grain and other articles of Provision, for a number of years back; and propositions for reducing them; with additional remarks. By Catherine Phillips. 8vo., pp. 90.
'95	Considerations on the Scarcity and High Price of Bread-Corn and Bread at the Market; suggesting the remedies, in a series of letters; first printed in the <i>Cambridge Chronicle</i> , and supposed to be written by Governor Pownal. 8vo. Account of the Experiments tried by the Board of Agriculture in composition of various sorts of Bread. Anno 1795. London: Printed for G. Nichol, Pall Mall, Bookseller to His Majesty and to the Board of Agriculture; and sold by Messrs. Robinson, Paternoster Row; J. Sewell, Cornhill; Cadel and Davies, Strand; William Creech, Edinburgh, and John Archer, Dublin. 4to., pp. 34.
'95	Thoughts on the most effectual Mode of Relieving the Poor during the Present Scarcity.
'95	Hints for the Relief of the Poor, by suggesting how they may procure a cheap and comfortable subsistence in times of scarcity.
'95	Useful Suggestions favourable to the Comfort of the Labouring People and of Decent Housekeepers: explaining how a small income may be made to go far in a family, so as to occasion a considerable saving in the article of bread; a circumstance of great importance to be known at the present juncton. 8vo., pp. 17.
'96	The Rev. J. Acland: An Answer to a Pamphlet published by Edward King, Esq., in which he attempts to prove the Public Utility of the National Debt; a confutation of that pernicious Doctrine, and a true Statement of the real Cause of the present High Price of Provisions.
'96	By "W. A.:" Injuries of the Public the Cause of Famine.
'96	An Enumeration of the Principal Vegetables and Vegetable Productions that may be substituted, either in part or wholly, in place of Wheat and other Bread-Corn in Times of Scarcity, with short notices respecting the Modes of preparing them for Use; by the author of "Some Information on the Use of Indian Corn."

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1796	An Inquiry into the Corn Trade and Corn Laws of Great Britain, and their influence on the prosperity of the Kingdom. By Alexander Dirom, Esq. London, 1 vol., 4to.
'97	In Sir Frederic Morton Eden's great work, <i>The State of the Poor: or an History of the Labouring Classes in England, &c.</i> , is given an appendix, "Containing a Comparative and Chronological Table of the Prices of Labour, of Provisions, and of Commodities," &c. From this work we have quoted in the present paper. He speaks of the importance of registering the price of the chief item of the food of the people, as the most accurate measure of the value of labour.
'97	Dispersion of Gloomy Apprehensions with respect to the Decline of the Corn Trade. By the Rev. John Howlett [vicar of Great Dunmow, Essex]. London, 8vo.
'98	The great work of Malthus— <i>Essay on the Principles of Population</i> —was first published this year, wherein occurs the following passage:— "I certainly think that, in preference to the interest of a particular State, a restriction upon the importation of foreign corn may sometimes be advantageous; but I feel still more certain that, in reference to the interests of Europe in general, the most perfect freedom of trade in corn, as well as in every other commodity, would be the most advantageous. Such a perfect freedom, however, could hardly fail to be followed by a more free and equal distribution of capital, which, though it would greatly advance the riches and happiness of Europe, would unquestionably render some parts of it poorer and less populous than they are at present; and there is little reason to expect that individual States will ever consent to sacrifice the wealth within their own confines to the wealth of the world."

Mr. Malthus says (*Population*, seventh edition, p. 257), "We know that the general effect of years of cheapness and abundance is to dispose of a great number of persons to marry, and under such circumstances the return to a year merely of an average crop might produce a scarcity."

It has not unfrequently been contended that the countries most subject to famine are those in which the population usually makes the most rapid progress. To this it has been answered—that the progress of the population being more rapid than that of the means of subsistence, famines are a necessary consequence; hence the Malthusian theory—limit the population to the resources of the country. This is in opposition to modern free-trade principles. What Malthus says (seventh edition, 1872, p. 256) is:—

"Of the other great scourge of mankind, famines, it may be observed that it is not in the nature of things that the increase of population should absolutely produce one. This increase, though rapid, is necessarily gradual; and as the human frame cannot be supported even for a short time without food, it is evident that no more human beings can grow up than there is provision to maintain. But though the principle of population cannot absolutely produce a famine, it prepares the way for one; and by frequently obliging the lower classes of people to subsist nearly on the smallest quantity of food that will support life, turns even a slight deficiency, from the failure of the seasons, into a severe dearth; and may be fairly said, therefore, to be one of the principal causes of famine."

He remarks also upon another well-known fact, and that is, the rapidity with which even old States recover from the desolations of war, pestilence, famine, and the convulsions of nature:—

"The traces of the most destructive famines in China, Indostan, Egypt, and other countries, are by all accounts, very soon obliterated; and the most tremendous convulsions of nature, such as volcanic eruptions and earthquakes, if they do not happen so frequently as to drive away the inhabitants or destroy their spirit of industry, have

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1798 ...	been found to produce but a trifling effect on the average population of any State."
'98 ...	A Proposal for Supplying London with Bread at a Uniform Price from one year to another according to an Annual Assise: by a Plan that may be applied to every Corporation in the Kingdom; would give Encouragement to Agriculture, and would prevent Rise of Prices in case of future Scanty Harvests. 8vo., pp. 39. The plan proposed was by means of granaries provided in the interest of the inhabitants.
'99 ...	Observations on the Statute of the 31 George II, cap. 29 [1757-58], concerning the Assise of Bread; with occasional Reference to the 3 George III, cap. 11, and the 13 George III, cap. 62; and to the late Statute for regulating the Assise of Bread in the City of London. By the Rev. Luke Heslop, Archdeacon of Bucks. 4to., pp. 32.
'99 ...	Suggestions offered to the consideration of the Public, and in particular to the more Opulent Classes of the Community, for the purpose of reducing the Consumption of Bread-Corn; and relieving at the same time the Labouring People, by the substitution of other Cheap, Wholesome and Nourishing Food; and especially by means of Soup Establishments, &c. 8vo., pp. 19.
1800 ...	A Maximum, or the Rise and Progress of Famine; addressed to the British People. Wright. 8vo.
1800 ...	George Edwards, M.D.: Effectual means of providing against the Distresses apprehended from the scarcity and high price of different articles of Food.
1800 ...	Thoughts and Details on Scarcity, originally presented to the Right Honourable William Pitt, in the month of November, 1795. By the late Right Honourable Edmund Burke. 8vo., pp. 48.
1800 ...	The True Causes of our present Distress for Provisions; with a Natural, Easy, and Effectual Plan for the future Prevention of so great a Calamity; with some hints respecting the absolute necessity of an increased Population. By William Brooke, F.S.A. 8vo., pp. 85.
1800 ...	A Temperate Discussion of the Causes which have led to the present High Price of Bread. Addressed to the Plain Sense of the People. [By Charles Long, Secretary to Treasury.] 8vo., pp. 43. The effect of war in sending up the price of wheat is here very clearly shown.
1800 ...	Lord Sheffield, A pamphlet: Remarks on the Deficiency of Grain occasioned by the Bad Harvest of 1799, and on the means of present relief and future plenty. 8vo.
1800 ...	Striking facts addressed to those who still disbelieve in a Real Scarcity, and a solemn appeal to all who think otherwise. By the author of "An Appeal to the Good Sense of the Higher and Wealthy Orders of the People," &c. 8vo. pp. 13. "N.B.—The quartern loaf is now selling at 1s. 9½d."
1800 ...	An Address to the Plain Sense of the People on the present High Price of Bread. 8vo., pp. 16.
1800 ...	Short Thoughts on the present Price of Provisions. By an Officer of the Volunteer Corps. 8vo., pp. 15.
1800 ...	A Determination of the Average Depression of the Price of Wheat in War below that of the preceding Peace, and of its readvance in the following, according to its yearly rates from the Revolution to the end of the last Peace; with Remarks on other greater variations of that entire period. By J. Brand, C.L., M.A., &c., &c. 8vo., pp. 102.
1800 ...	Effectual means of providing, according to the Exigencies of the Evil, against the Distress apprehended from the Scarcity and High Prices of Articles of Food. By George Edwards, Esq. 8vo., pp. 43. Dedicated to Arthur Young.
1800 ...	Remarks on the Deficiency of Grain, occasioned by the Bad Harvest of 1799; on the means of Present Relief, and of Future Plenty, with an Appendix containing accounts of all Corn Imported and Exported,

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1800	with the Prices from 1697 to the 10th October, 1800; and also several other Tables. By John Lord Sheffield. 8vo., pp. 120, and tables.
1800	Thoughts on the Present Prices of Provisions, their Causes and Remedies; addressed to all ranks of the people. By an Independent Gentleman [Mr. Simmons]. 8vo., pp. 87.
1800	Advice to the Poor, and Hints to the Rich, on the present High Price of the Necessaries of Life. A new impression, corrected. By a Layman of Middling Rank. 8vo., pp. 29, and postscript.
1800	Inquiry into the Causes and Remedies of the late and present Scarcity and High Price of Provisions, in a Letter to the Right Honourable Earl Spencer, K.G., First Lord of the Admiralty, &c., &c. 8vo., pp. 71.
1800	Moderation is Salvation, addressed to the People of England at the Present Scarcity. By a Plain Man. 8vo., pp. 31. "Stand to your Arms, Britons! Strike home! and spare the <i>quartern loaf</i> !"
1800	An Examination of the Statistics now in force relating to the Assise of Bread; with Remarks on the Bill intended to be brought into Parliament by the Country Bakers. By James Nasmith, D.D., one of His Majesty's Justices of the Peace for the County of Cambridge and Isle of Ely. Wisbeach: Printed and sold by John White, &c. Price 2s. 6d. 8vo., pp. 85.
1800	Dr. Edward Gardner, M.D., Reflections upon the Evil Effects of an Increasing Population on the present High Prices of Provisions, particularly Corn; upon the Bounty Act; and upon the propriety of General Enclosures, in which a mode is suggested of relieving the present necessities of the Poor upon the principles of Equity. To which is added an Appendix containing some remarks upon the subject of Tythes; further Observations upon Population; and animadversions upon some late publications on the present scarcity.
1800	An Appeal to a Humane Public for the poorer Millers and Bakers, respecting the High Price of Bread; and the injury sustained by them from the Establishment of the London Flour, Meal, and Bread Company, with an Account of the Effect the Institution of this new Chartered Company has in immediately Raising instead of Lowering the Price of Corn. By an Attentive Observer. 8vo., pp. 24.
1800	The Use of Indian Corn as an Article of Food. By authority, A. Thorn, 87, Abbey Street, Dublin. 8vo., pp. 4.
1800	Industry, and a Pious Submission, Charity, and a Strict Economy, recommended and enforced, as the best means of alleviating the Present Distress. A Sermon preached in the Parish Church of St. Anne, Westminster, on Sunday, the 14th day of December, 1800, being the day on which his Majesty's Proclamation on the Scarcity of Grain was directed to be read. By Jos. Jefferson, A.M. and F.A.S. Small 4to., pp. 28, and Appendix. In this publication is contained the remarkable resolution designated "The Engagement," which I have given at the end of Table IX.
1800	On the Causes of the High Price of Provisions. By same author. 8vo.
1800	Anonymously: The Cause of the present threatened Famine traced to its real source, viz., an actual depreciation of our circulating medium, occasioned by the Paper Currency, with which the War, the shock given to public credit in 1794, the stoppage of the Bank in 1797, and the Bankruptcies in Hamburgh in 1796, inundated the Country to accommodate Government, and enable the merchants to keep up the price of their merchandise, shewing by an Arithmetical Calculation founded on facts, the extent, nay, the very mode of the progress which the Paper System has made in reducing the People to Paupers. With its only apparent practicable remedy. Jordan. 8vo.
1800	An Investigation into the Cause of the present High Price of Provisions. By the author of the Essay on the Principle of Population [Mr. Malthus]. London, 8vo.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1801	Atwood's Review of the Statute and Ordinances of Assize, from the 4th of King John, to the 37 of George III. 4to.
'01	Practical means of Counteracting the present Scarcity, and preventing Famine in the future. By George Edwards, M.D. Same year, anonymous: Humane suggestions to Members of the first Imperial Parliament, or an Appeal to the Ministry; being urgent reasons for Credit and Famine.
'01	Bread, or the Poor, a poem, with notes and illustrations. By Mr. Pratt, author of Sympathy, Gleanings, &c. 4to., pp. 88, and 21 pages of notes, probably a correct picture of the times.
'01	Observations on the Act which passed into a law in 1800, to incorporate certain persons by the name of the London Company, for the manufacture of Flour, Meal and Bread. By John Henry Prince, Bookseller. London, 8vo.
'01	A Brief Review of the causes which have progressively operated to enhance the Price of Provisions, but particularly of Bread-Corn, with suggestions as to the best means of alleviating the present distress, and preventing the recurrence of a similar calamity. 8vo., pp. 91.
'01	A calm Investigation of the circumstances that have led to the present Scarcity of Grain in Britain, suggesting the means of alleviating that evil, and of preventing the recurrence of such a calamity in future. By James Anderson, LL.D., &c. London, 8vo.
'01	Review of the Statutes and Ordinances of Assize which have been established in England from the fourth year of King John, 1202, to the thirty-seventh of his present majority (George III). By G. Atwood, F.R.S., London, 4to.
'04	An Essay on the Impolicy of a Bounty on the Exportation of Grain, and on the principles which ought to regulate the commerce of Grain. [By James Mill, author of the <i>History of British India</i> .] London, 8vo.
'04	Archibald Duncan, "of the Royal Navy." The Mariner's Chronicle, being a collection of the most interesting narratives of Shipwrecks, Fires, Famines, and other calamities incident to a life of maritime enterprise. "No. 1, to be completed in twenty numbers, 6d. each."
'05	A Treatise on the Art of Bread making, wherein the Mealing Trade, Assize Laws, and every circumstance connected with the Art, is particularly examined.
'08	Mr. W. T. Comber: An Inquiry into the state of National Subsistence, as connected with the progress of Wealth and Population, &c., wherein much valuable information will be found upon the operation of the effect on the people of the legislative enactments herein reviewed.
'08	Dr. James Anderson (Madras): Journal of the establishment of Napal and Tuna for the prevention or cure of Scurvy, Dysentery, and Ulcers on Shipboard and Navigation: of Famine on shore.
'12	Thoughts upon the immediate means of meeting the Pressure of Want. By a London Merchant. 8vo., pp. 16.
'14	Mr. N. Lowis: Defence of the claim for an increase of the Import Duty of Grain. 8vo.
'14	A letter to the Right Honourable Sir William Domville, Bart., the Lord Mayor of London [on the Assize of Bread]. By John Dumbell. 8vo., pp. 147. A scheme to compete with the Bakers.
'14	First and Second Reports from the Committees of the House of Lords appointed to inquire into the state of the Growth, Commerce, and Consumption of Grain, and all laws relating thereto: to whom were referred the several petitions presented to the House in the session of 1813-14, respecting the Corn Laws. 2nd edition.
'14	Considerations on the Protection required by British Agriculture, and on the Influence of the Price of Corn on Exportable Productions. By William Jacob, Esq. London, 8vo.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1814	Observations on the Effects of the Corn Laws. By the Rev. T. R. Malthus. London, 8vo.
'15	The Rev. T. R. Malthus, a pamphlet: Grounds of an Opinion on the Policy of Restricting the Importation of Foreign Corn. 8vo.
'15	The Rev. T. R. Malthus, a pamphlet: On the Effects of the Corn Laws on Agriculture, &c. 8vo.
'15	Mr. David Ricardo: An Essay on the Influence of a Low Price of Corn on the Profits of Stock.
'15	Mr. Robert Wilson (Edinburgh): Enquiry into the Causes of the High Price of Corn and Labour. 8vo.
'15	Essay on the Application of Capital to Land, with Observations on the Impolicy of any great Restrictions of the Importation of Corn. By a Fellow of University College, Oxford. 8vo.
'15	Brickwood's Facts on the Corn Laws. 8vo.
'15	In Mr. Joshua Milne's Treatise on Annuities, &c., published this year, his first table is one "exhibiting the progress of the population of England and Wales and the price of Wheat from the year 1710 to 1810." We do not propose to quote that table here; but the remarks which accompany it deserve to be noticed:— <p>"It will be observed, that any material reduction in the price of wheat is almost always accompanied by an increase both of the marriages and conceptions, and by a decrease in the number of burials; consequently by an increase in the excess of births above the deaths. Also, that any material rise in the price is generally attended by a corresponding decrease in the marriages and conceptions, and by an increase in the burials; therefore by a decrease in the excess of the births above the deaths. Thus it appears, that an increase in the quantity of food, or in the facility wherewith the labouring classes can obtain it, accelerates the progress of the population, both by augmenting the actual fecundity, and diminishing the rate of mortality; and that a scarcity of food retards the increase of the people, by producing in both ways opposite effects."</p> <p>The theory of the increase of fecundity by reason of the food supply has been controverted.</p>
'15	Mr. C. Culverhouse: Arrangement of the Bread Laws, with an Historical Introduction, and some Curious Specimens of the Ancient Bread Laws, and Tables exhibiting the Price and Assize of Bread from the Price of Wheat and Flour.
'15	An Essay on the Influence of a Low Price of Corn on the Profits of Stock, with Remarks on Mr. Malthus's Last Two Publications. By David Ricardo, Esq., London. 8vo.
'15	Report and Evidence from the Select Committee of the House of Commons on the Laws Relating to the Manufacture, Sale, and Assize of Bread. London, Folio.
'16	Mr. Dugald Bannatyne delivered before the Literary and Commercial Society of Glasgow an essay: Observations on the Principles which enter into the Commerce in Grain, and into the Measures for supplying Food to the People. The substance of which was afterwards published, and attracted considerable attention.
'18	[Rules of] Bread Association for the District of Pinner, Harrow Weald, Great Stanmore, Little Stanmore, and Edgware, to Encourage Industry and Economy, by inducing the Poor to Deposit small portion of their Earnings during the Summer, to be returned to them with the addition of at least half as much again from the Funds of the Charity, in the Articles of Bread and Flour, supplied by their own Bakers, at half-price, in the course of the Winter. Established September 1, 1817. 8vo., pp. 30, and appendix.
'19	Dearness not Scarcity: its Cause and Remedy. By Josiah Collier. Humbly offered to the consideration of His Majesty's Ministers. 8vo., pp. 17.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1820	Mr. John Wright (Nottingham) : Hints on the Importation of Corn, and on Circulating Medium. 8vo.
'20	Letter to Sir Robert Peel on the Comparative Operation of the Corn Laws and Taxation. By a Briton.
'21	Report from, and Minutes of Evidence taken before the Select Committee of the House of Commons on the Depressed State of Agriculture. London, folio. This report (which was drawn up by Mr. Huskisson) contains a forcible exposition of the mischievous influence of the law of 1815. Mr. Ricardo was a member of this Committee, and not choosing to have his opinions identified with those of the Report, he published his famous tract of 1822.
'22	On Protection to Agriculture. By David Ricardo, Esq., M.P. This pamphlet discusses the important questions of remunerating price ; the influence of a law and of a high value of corn or wages and profits ; the effect of taxation on agriculture and manufactures ; the grounds on which restrictions on importation may be justified, with others of equal interest and difficulty. "Had Mr. Ricardo never written anything else, this pamphlet would have placed him in the very first rank of political economists."—McCULLOCH.
'22	A Letter to the Agriculturists of the County of Salop on the present State and Future Prospects of Agriculture. By W. W. Whitmore, Esq., M.P. London, 8vo.
'22	"An Essay on the Depressed State of Agriculture." By James Cleghorn [Editor of <i>Edinburgh Farmers' Magazine</i>]. Published by order of the Highland Society. Edinburgh, 8vo.
'23	Observations on the Present State of Landed Property, and on the Prospects of the Landlords and Farmers. By David Low. Edinburgh, 8vo.
'23	Wright's Remarks on the Erroneous Opinions which led to the New Corn Law, and also on those of the Bullionists. 8vo.
'26	A Disquisition on the Corn Laws, with a few Observations on Pauperism, as it appears among the Higher Orders as well as among the Lower Orders of Society. By Robert Wilson, author of the History of Hawick.
'26	A Compendium of the Laws passed from time to time for Regulating and Restricting the Importation, Exportation, and Consumption of Foreign Corn from the year 1660, and a series of Accounts from the date of the Earliest Records, showing the Operation of the several Statutes, and the average Price of Corn, presenting a complete view of the Corn Trade of Great Britain. Compiled from Public Documents. 8vo.
'26	Report on the Trade in Foreign Corn, and on the Agriculture of the North of Europe. By William Jacob, F.R.S.
'26	Prices of Corn and Wages of Labour, with Observations, &c. By Sir Edward West [author of "Tract on Rent"]. London, 8vo.
'26	Cheap Corn best for Farmers, proved in a Letter to G. H. Sumner, Esq., M.P. for Surrey. By one of his Constituents. [Henry Drummond, Esq., founder of the Chair of Political Economy in the University of Oxford.]
'27	Mr. M. Fletcher, a pamphlet, On the Causes which Influences the Price of Corn. 8vo.
'27	An Essay on the External Corn Trade. By Colonel Torrens, London, 1 vol., 8vo. "Among the most able of the publications on the impolicy of restricting the importation of corn, may be classed Major (now Colonel) Torrens's Essay His arguments appear to me unanswerable, and to be unanswerable."—RICARDO, Political Economy.
'27	A Catechism of the Corn Laws, with a list of Fallacies and the Answers. [By Colonel Perronet Thomson.] London, 8vo.
'27	Report on the Trade in Corn and the Agriculture of the North of Europe. By M. Jacob, Esq. Printed by order of the House of

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1827	Commons in folio in 1826 and 1827; afterwards reprinted 8vo. These reports contain much information of value.
'27	Corn and Currency: an Address to the Landowners. By Sir James Graham, M.P. London, 8vo. "An exceedingly well written, able pamphlet."—McCULLOCH.
'27	Report from and Evidence taken before the Select Committee of the House of Lords, on the Price of Shipping Foreign Grain from Foreign Ports. Folio.
'28	Mr. Thomas Hopkins, a pamphlet, On Rent of Land, and its Influence on Subsistence and Population.
'28	Tracts relating to the Corn Trade and Corn Laws, including the Second Report ordered to be printed by the two Houses of Parliament. By William Jacob, F.R.S.
'28	Free Trade in Corn: the Real Interest of the Landlord and the True Policy of the State. By a Cumberland Landowner. London, 8vo.
'29	Mr. Thomas Tooke, a pamphlet, On the Currency in connection with the Corn Trade, and on the Corn Laws.
'30	W. W. F. Lloyd (Oxford), Prices of Corn in Oxford in the beginning of the Fourteenth Century; with Miscellaneous Notices of Prices in other Places, collected from MSS. 8vo.
'30	In Mr. M. T. Sadler's great work, "The Law of Population," it is contended, and the contention is to all appearance supported by the evidence of statistics, that cheap food (he takes his example from the price of wheat) does not increase the fecundity of the people <i>inter se</i> . There may be more marriages, and hence more births; but the power of fecundity is not itself increased by means of cheap food.
'30	Every Man his own Purveyor. Proposal for the formation of a Club for cheapening the necessaries of life; being the substance of a series of papers originally published in the <i>Spectator</i> newspaper, with additional remarks. 8vo., pp. 23.
'33	An Inquiry into the Expediency of the Existing Restrictions on the Importation of Foreign Corn; with Observations on the present Social and Political Prospects of Great Britain. By John Burton. London, 8vo.
'34	A Clue to the cause of Dear Bread and Fallen Rents, submitted to the consideration of Members of Parliament. By a Landed Proprietor. August, 1834. 8vo., pp. 8.
'34	Letters on the Corn Laws and on the Rights of the Working Classes, originally inserted in the <i>Morning Chronicle</i> , showing the injustice and also the impolicy, &c., [of the Corn Laws]. By H. B. T., London. 8vo. The real author of these letters is understood to have been Mr. Deacon Hume, one of the secretaries of the Board of Trade, who had a principal share in the consolidation of the Customs and Navigation Laws, effected in 1825.
'39	Influence of the Corn Laws as affecting all classes of the community, and particularly the Landed Interests. By James Wilson, Esq. London, 1839.
'39	The effect of Restrictions on the Importation of Corn considered with reference to the Landowners, Farmers, and Labourers. By G. R. Porter, Esq. [of the Board of Trade, author of the "Progress of the Nation"]. London. 8vo.
'39	Corn Laws: An authentic report of the late important discussions in the Manchester Chamber of Commerce, on the Destructive Effects of the Corn Laws upon the Trade and Manufactures of the Country. London, 8vo.
'39	Mr. R. Torrens. Three Letters on the Effects of the Corn Laws. 8vo.
'40	Mr. W. Atkinson, a pamphlet, On Mr. Huskisson, Free Trade and the Corn Laws. 8vo.
'40	Influences of the Corn Law as affecting all Classes of the Community, and particularly the Landed Interests. Second edition. By James Wilson.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1841	Mr. J. R. M'Culloch, a pamphlet, Statements illustrative of the Policy and probable consequences of this proposed Repeal of the Existing Corn Laws. 8vo.
'41	Colonel William Napier. Observations on the Corn Laws. 8vo.
'41	An Address to the Clergy of the Established Church of England on the effects of a Scarcity of Food: showing the tendency of Starvation to engender Epidemic Disease. By a Physician. 8vo., pp. 16. An important consideration is here involved.
'41	Statements Illustrative of the Policy and Probable Consequences of the Proposed Repeal of the existing Corn Laws, and the Imposition in their Stead of a Moderate Fixed Duty on Foreign Corn when entered for Consumption. By J. R. McCulloch. London, 8vo. This pamphlet had a very extensive circulation.
'41	A Few Words on the Corn Laws, wherein are brought under consideration certain of the Statements which are to be found in the Third Edition of Mr. McCulloch's Pamphlet on the same subject. By General Sir James Charles Dalbiac, K.C.H. London. 8vo.
'42	An Inquiry into the Principles which ought to regulate the Imposition of Duties on Foreign Corn; in answer [to Mr. McCulloch's pamphlet]. By George Taylor, Esq., W.S., Edinburgh, 8vo.
'42	Mr. G. Beauchere, Operation of Monopolies on the Production of Food, as illustrated by the Corn Laws, for which the only adequate Remedies are Moral Government and Free Trade. 8vo.
'42	Suggestions offered, and data given, in proof that a sufficient supply of Bread Corn for the Inhabitants of Great Britain, the growth of their own soil, and produce of their own industry, may be obtained in the year 1843, and for an indefinite period to come. By a Tourist from the North. 8vo., pp. 18.
'42	Vindication of a fixed Duty on Corn, &c. By J. G. Hubbard, Esq. London, 8vo.
'42	Information Concerning the Cost and Supply of various Articles of Agricultural Produce, &c., in various parts of Northern Europe. Obtained by James Meek, Esq., under instructions from government. Printed by order of the House of Commons. Folio. "A carefully compiled paper, comprising much useful information."—McCULLOCH.
'43	How will Free Trade in Corn affect the Farmer? Being an Examination of the Effects of Corn Laws upon British Agriculture. By C. G. Welford, Esq., London, 8vo.
'43	Corn Laws. The Consequences of the Sliding Scale Examined and Exposed. Being the substance of a Speech delivered in the House of Lords on the 14th of March, 1843. By Lord Monteagle. London, 8vo.
'43	The Rev. Robert Everest, Chaplain to the East India Company, contributed to the <i>Journal</i> of this Society a short paper: On the Famines that have devastated India, and on the probability of their being periodical. The author says:
	"In comparing the devastating effects of drought, which I have more than once witnessed in India, with the accounts of similar calamities in the history of that country, it occurred to me that no one had ever ascertained whether, in that part of the world, such unfavourable seasons had anything like a periodical occurrence. For the purposes of such an inquiry, it was impossible to refer to meteorological registers for a long series of years, as no such documents existed. The only alternative, therefore, was to examine the prices of corn for as far back as they could be obtained; assuming that they would roughly indicate the character of the seasons. In support of this course it may be remarked that the harvests are but triflingly affected by other atmospherical circumstances than moisture and dryness. Of heat and sunshine there is always sufficient to bring the crops to perfection."

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1843 ...	He then indicates the sources from which he had drawn information, and gives the principal results as follows :— “Great irregularity was observable in any one list; but the more numerous the lists were from which the averages were taken, the greater was the approximation to a regular ascending and descending series, with recurrences at about eight or ten years’ distance, leading to the belief that if we could obtain a correct measure of the average atmospheric changes over a considerable surface of the earth, instead of those only of particular localities, we should be able to observe something like regular intervals in the seasons. . . . Assuming that the variations in price follow the variations of the seasons as to dryness and moisture, it was to be expected that analogous variations might be observed in the depths of large inland seas, such as the Caspian and the lakes of North America. . . .” He found on consulting such authorities as were available to him, that in the great lakes of America there is a rise for three years, and then a corresponding decline; but this was not altogether uniform, for sometimes the succession of similar seasons extended to five and even ten years.
’44	How much would the Four-pound Loaf be Lowered by the Repeal of the Corn Laws? 8vo., pp. 8.
’44	On Cases of Starvation and Extreme Distress among the Humbler Classes, considered as one of the main symptoms of the present disorganisation of Society; with a preparatory plan for remedying these evils in the metropolis, and other large cities. By J. L., late of the Colonial Service, with an introduction by Viscount Ranelagh. 8vo., pp. 47. Only 250 copies printed—quite enough!
’44	Free Trade and Protection. Being a tract on the Necessity of Agricultural Protection. By Archibald Alison, Esq., F.R.S. [Author of <i>History of Europe</i> during the French Revolution]. Edinburgh and London, 8vo. The writer ascribed the decay of agriculture in ancient <i>Italy</i> , under the Emperors, principally to the importation of corn from Egypt, Mauritania, &c.
’46	A Preliminary Inquiry into the Physical Laws Governing the Periods of Famines and Panics. By Hyde Clarke, contributed to the <i>Railway Register</i> . In this paper it was sought to show that abundant harvests led to speculation; bad harvests to panics. The author says therein : “If there be great good from giving special attention to the statistics of human life, there seems to be no less good to be sought in the study of those laws which regulate the supply of human food, and which influence animal and vegetable life.” Much historical and chronological information is brought to bear upon the question. This year (1846) Dr. Farr read before this Society a paper on, <i>The Influence of Scarcities and of the High Prices of Wheat on the Mortality of the People of England</i> . This paper is replete with statistical and other information of value. The author says, “I some time ago examined nearly all the English chroniclers and historians, from Bede and the Saxon chronicle down to Stow and Holingshed, and extracted all the passages in which scarcities, famines, or epidemics are mentioned.” The following passages are appropriate to our present paper. They refer to England only :— “In the eleventh and twelfth centuries a famine is recorded every fourteen years on an average; and the people suffered twenty years of famine in 200 years. In the thirteenth century my list exhibits the same proportion of famine, and nearly the same number of years of famine; the addition of five years of high prices makes the proportion greater. Upon the whole, the scarcities decrease during the three following centuries; but the average from 1201 to 1600 is the same—namely, seven famine, and ten years of famines in a century. This is the law regulating scarcities in England.

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1846 ...	<p>"The destruction of grain, of which famines are the results, arises from 'bad seed-times,' 'long and severe winters,' 'droughts,' 'incessant rains during summer or harvest,' 'tempests,' 'oppression of the cultivators of the soil,' and zymotic diseases of the wheat plant—a great variety of phenomena generally produced by causes beyond our knowledge and control, but subject to laws which systematic agricultural statistics will unfold.</p> <p>"The collection of the observations loosely made by the chroniclers, on no well-considered uniform plan, but extending over several hundred years, not only establishes the existence, but indicates the nature of these laws."</p>
'47 ...	<p>The Black Prophet: a tale of the Irish Famine; with illustrations on wood by William Harvey, early impressions. 8vo., ornamental boards. By W. Carleton.</p>
49 ...	<p>Mr. J. T. Danson, F.S.S., now of Liverpool, read before this Society a paper: A Contribution towards an Investigation of the Changes which have taken place in the Condition of the people of the United Kingdom during the eight years extending from the Harvest of 1839 to the Harvest of 1847; and an Attempt to develop the Connexion (if any) between the Changes observed and the Variations occurring during the same Period, in the Prices of the most necessary Articles of Food. This, like all the writings of the same author, is marked by many points of careful observation and philosophic reflection; while the statistics it contains are valuable.</p>
'49 ...	<p>Dr. Lyon Playfair published an important treatise, <i>On the Food of Man in relation to his Useful Work</i>. This book should be consulted by all who desire to comprehend the full bearings of the effect of food on the human system.</p>
	<p>The Registrar-General in his 8th report (published 1849), said:— "As statistical science and education advance, the severity of seasons of distress—whose general course can be calculated—will be diminished by mutual aid; and provision will be made in prosperity against their recurrence: as the losses of shipwreck, fire, and life to society are mitigated by the various classes of insurances. Knowledge will banish panic and mitigate pain."</p>
'52 ...	<p>Dr. W. A. Guy, M.B., contributed to this Society a paper, <i>On the relation of the Price of Wheat to the Revenue</i>; and the same is printed in its Journal, vol. xvi, p. 53. The main conclusions the author arrived at were the following:—</p> <p>2. A comparison of groups of years of high and low prices of wheat, issues in a result highly favourable to the theory that the price of wheat exercises a marked influence on the revenue, and this is especially the case when the years immediately following those of high or of low prices are substituted for the years coinciding with them.</p> <p>3. The result of these comparisons is rendered still more striking when that portion of the revenue which is derived from wheat and wheat flour is subtracted from the total net ordinary revenue; and this correction has, at the same time, the effect of diminishing the amount of the irregularities just referred to.</p> <p>The paper contains many valuable statistics.</p>
'55 ...	<p>The Bread Question, or where the Shoe Pinches. By E. G. Swann. 8vo.</p>
'57 ...	<p>Buckle, in his <i>History of Civilisation</i>, says:— "Those frightful famines by which Europe used to be ravaged several times in every century have ceased; and so successfully have we grappled with them, that there is not the slightest fear of their ever returning with anything like their former severity. Indeed, our resources are now so great that we could at worst only suffer from a slight and temporary scarcity; since in the present state of knowledge,</p>

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1857	the evil would be met at the outset by the remedies which chemical science could easily suggest."
'60	In the first volume of the <i>Journal de la Société de Statistique de Paris</i> , published this year, is an article on the Famines of <i>France</i> , by M. A. Legoyt.
'61	Report on the [Indian] Famine of 1860-61. By Colonel Baird Smith, 2 parts. [Official.]
'61	The Rev. James E. T. Rogers, M.A. (Oxford), read before the British Association at Manchester a paper, Facts and Observations on Wages and Prices in England during the sixteenth and seventeenth centuries, and more particularly during the thirty-nine years 1582-1620; the data principally employed being the Fabric Rolls of York Minster, and the Shuttleworth household books. In this paper is much valuable information regarding prices of food; but as this paper formed in part the basis of the work published by the same author in 1865, we need not dwell upon it here. (See 1866.)
'63	The Rev. J. E. T. Rogers, M.A., read before the Statistical Society of London this year a paper, On a Continuous Price of Wheat for one-hundred and five years from 1380 to 1484. The facts contained herein we shall endeavour to make available in the table to be given at the end of this article.
'66	Free Trade—Good's (W. W.) Political, Agricultural and Commercial Fallacies; or the prospect of the Nation after twenty years' Free Trade. 8vo.
'66	At the Social Science Congress (Manchester), Major-General Sir Arthur Cotton read a paper on Famines in India, their Causes and Remedies, wherein he gives some important statistical information. Regarding the loss of property consequent upon these Indian famines, Colonel Smith had estimated it in 1860 at $3\frac{1}{4}$ millions sterling. Of the loss of public revenue, the commissioners estimated that in the eighteen years following 1833, in Guntoor alone, there was a loss of 900,000 <i>l.</i> The writer said one reason assigned for these famines was the want of water; but there was no such want in India. When Guntoor lost 200,000 by famine, a river was flowing through it which never failed, and which in a single day carried to the sea 4,000 million cubic yards of water; and as 6,000 cubic yards will secure a crop of rice on an acre, water enough was running to waste in that one river in a day, in that very district, to secure 700,000 acres of rice, the food of $2\frac{1}{2}$ millions of people for a year. A single day's water would thus provide food for five times the whole population of that district. The sole cause of the famine was that the water was not distributed over the land. There was indeed food in abundance in other parts of India; but there arose the difficulty of transit. The irrigating canals might be made available to overcome this difficulty—so that the storage of water would meet and overcome a double difficulty. He showed that in many districts the works required might easily be carried out at a profit.
'66	Professor J. E. T. Rogers, F.R.S., History of Agriculture and Prices in England, wherein is contained tables of the prices of commodities in all parts of England between the years 1259 and 1400, and much other information on the subject of food and prices of a most valuable character. The author says in his preface—referring to the period over which his inquiry extends— "As there were no regular means for supplying deficiencies in the produce of the home market by foreign importations, the prices of necessities, such as corn, give no small insight into the course of the seasons; and supply the best means for discovering a cycle of seasons, if, as I do not dare to assert, such a cycle can yet be found." [If Professor Rogers had had before him the Tables IX, X, and XII, of this present paper, he would have seen that there were

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1866	legislative influences at work even at that remote period, which were designed to interfere with the ordinary course of prices.]
'67	The Madras Famine of 1866. By R. A. Dalzell, M.C.S. [official.]
'67	Minute by Sir Cecil Beadon on the Famine of Bengal and Orissa during 1865-66. Dated 5th January, 1867. [Official.]
'67	Report on the Famine in the Behar Districts and Southall Pergunnahs in 1868. By F. R. Cockerell. Dated 15th March, 1867. [Official.]
'67	Report of the Commissioners appointed to inquire into the Famine in Bengal and Orissa during 1866. 2 vols., 1867. [Official.]
'67	Further Report of the Commissioners appointed to inquire into the Famine in Bengal and Orissa during 1866. With appendices, 1867. [Official.]
'68	Report on past Famines of the Bombay Presidency. By T. A. Etheridge, Lieut-Colonel, 1868. [Official.]
'68	Report on the Past Famines in the North-Western Provinces. By C. E. R. Girdlestone. 1868. [Official.]
'69	Mr. Wm. Newmarch, F.R.S., in his inaugural address on opening the session of this Society, selected for consideration the state of knowledge in regard to some of the topics falling within the scope of this Society, and said : "First, as regards the accurate statistical determination of the average consumption of the chief articles of food among different classes of the population—corn, butchers' meat, and colonial produce. At present we cannot speak with any approach to accuracy of the extent and cost of the most vital of all requirements, viz., the food of the people. We are perpetually guessing at the probable consumption of wheat and other grains per head—the same of potatoes and butchers' meat, and colonial produce; and until, by a series of extensive and well-devised observations of rigid statistical facts, we arrive at results entitled to credence, we shall continue to speculate and reason in the dark." In the absence of such knowledge, we probably suffer considerably in the cost of products—meat for instance.
'69	Report on the operations of the Central Committee, Famine Relief Fund, North-Western Provinces, 1870. [Official.]
'71	Report on the Famine in the Punjab during 1869-70. 1871. [Official.]
'71	A Narrative of the Drought and Famine which prevailed in the North-Western Provinces during the years 1868, 1869, and beginning of 1870. Compiled by Frederick Henvey, 1871.
'73	Bengal, the Crops of, 1865-66, for comparison with those of 1873-74. By J. C. Geddes, C.S., 1873. [Official.]
'73	Mr. W. Brittlebank, Persia during the Famine: a Narrative of a Tour in the East, and of the Journey Out and Home. Post 8vo. London. 3s. 6d.
'73	Mr. W. Taylor read before the East India Association in London a paper, Famines in India: their Remedy and Prevention. This paper is published in the Transactions of the Society, and is remarkable for the great practical knowledge it displays.
'74	Administrative Experiences recorded in former Famines. By J. C. Geddes, C.S., 1874. [Official.]
'74	Correspondence relating to the Famine in Bengal and Behar in 1873-74. 1874. [Official.]
'74	Special Narratives of the Drought in Bengal and Behar in 1873-74, together with Minutes. By the Hon. Sir Richard Temple, K.C.S.I. 1874. [Official.]
'74	Minute by the Hon. Sir Richard Temple, K.C.S.I., Lieutenant-Governor of Bengal, on the Famine in Bengal and Behar during 1874. Dated 31st October, 1874. [Official.]
'75	At the meeting of the British Association held at Bristol this year, Professor W. Stanley Jevons, F.R.S., read a novel paper, viz.: The

TABLE XV.—*The Literature of Famines and of the Corn Laws—Contd.*

A.D.	
1875	<p>Influence of the Sun-Spot Period upon the Price of Corn. After alluding to the attempts made by Mr. Carrington to trace a connection between the price of corn and the variations in the sun spots during portions of the last and present centuries, the professor said that Mr. Schuster had pointed out that the years of good vintage in Western Europe have occurred at intervals approximating to eleven years, the average length of the principal sun-spot period. The elaborate collection of the prices of commodities in all parts of England between the years 1259 and 1400, published by Professor Rogers, appeared to afford the best data for deciding whether the sun-spot period influences the price of corn. For this purpose, tables of the average prices per quarter of wheat and other grain, expressed in grains of pure silver, were used. Each series of prices was divided into intervals of eleven years, which were ranged under each other and averaged, so as to give the average of the first, of the second, of the third, &c., years, the commencement of the period being arbitrarily assumed. It was found that the price of each kind of produce examined rises in the first four years, but afterwards falls. It is further shown that the <i>maxima</i> prices are found to fall into the tenth, eleventh, first, second, and third years of the assumed eleven-year period. These results are to be looked upon as only preliminary, and need further investigation. It was also pointed out that commercial panics have tended to recur during the last fifty-four years in a distinctly periodic manner. The average length of interval between the principal panics is about 10·8 years, nearly coinciding with 11·11, the length of the solar-spot period. If Professor Balfour Stewart be right in holding that the sun-spot variation depends on the configuration of the planets, it would appear that these configurations are the remote cause of the greatest commercial disasters. This is but a meagre outline of the remarkable paper.</p>
'76	Food Grain Supply and Famine Relief in Behar and Bengal. By
	A. P. MacDonnell, B.C.S. 1876. [Official.]
'77	East India (Famine Correspondence) Printed Parliamentary Papers.
	[C. 1879.] Parts 1 to 4. 1877. [Official.]
'77	A Century of Famines. Being particulars of all the Famines that have visited India since the year 1770; and an inquiry into the best means of providing against them. By F. C. Danvers, of the Foreign Office. [Official.]
'77	The Landed Interest and the Supply of Food. By James Caird, C.B.,
	F.R.S.
'77	Mr. Stephen Bourne, F.S.S., read before the Manchester Statistical Society a paper "On the increasing dependence of this country upon foreign supplies for food," which paper is published in the transactions of that Society.
'78	Irrigation regarded as a preventative of Indian Famines. By W. T. Thornton, Esq., C.B. Read before the Society of Arts, 22nd February, 1878, and published in the journal of that Society, vol. xxvi, p. 272.
'78	The Famine Campaign in India, 1876-78. By William Digby. "Mr Digby's own services were invaluable, and deserved a better fate than to be consigned to oblivion in these two dry and chaotic volumes."— <i>Athenæum</i> , 28th September, 1878.

DISCUSSION *on* MR. WALFORD'S PAPER.

MR. R. H. PATTERSON expressed his disappointment with the paper, because Mr. Walford had departed from the first part of his paper, and had gone into general remarks on the question of famines. At the same time every section of the paper was, he thought, very interesting. He could not attach the same importance as Mr. Walford did to the depreciation of currency as one of the causes of famine. A famine was caused by the failure of the ordinary productiveness of the soil, and what the depreciation of currency had to do with it he was at a loss to understand. Mr. Walford had attributed the high price of wheat in some instances to the scarcity of money; but it was well known that if money was scarce, the price instead of being high would be very low. Mr. Walford had given a most carefully prepared list of famines which would be of great service. He (Mr. Patterson) would point out, that famines were caused either by too much or too little water. In northern countries all famines were produced by cold and wet weather, and in southern countries they were caused by hot weather and scarcity of water. He would also call attention to the fact that recent scientific observations pointed to the existence of cycles of good and bad seasons connected with the spots on the sun. If the changes in the sun, and also the altered position of the planetary bodies were considered, it would be found that *à priori*, there was every reason to suppose that the cosmical condition of the earth would be correspondingly altered. So long as the distribution of land and water remain unchanged, it was impossible for the physical condition of the earth to change, except from extra-terrestrial influences. And he held it certain that ere long it would be found that cycles of this kind existed corresponding with the movements, the nearness or distance, of the larger surrounding orbs. He hoped that he would be excused for expressing his disappointment at the turn the present paper had taken.

Professor LEONE LEVI said they must all be indebted to Mr. Walford for such a collection of luminous facts, which would be of great use to the student of statistics. He should like to ask the author of the paper whether his attention had been directed to the cultivation of opium in India as a cause of the prevalence of famines in that country.

Mr. THOMAS HUDSON wished to know if the author had taken into account the misappropriation of grain in the manufacture of intoxicating drinks. As far as his memory served him, in 1846, during the terrible famine in Ireland, the number of quarters of foreign grain imported in that year was about equal to the quantity which was consumed in the manufacture of alcoholic liquors. This was a point worthy of Mr. Walford's consideration, because if a

raid had been made on the distillers and brewers in the year mentioned, the necessity for the importation of so much grain would have been superseded. He also called attention to the cultivation of hops, and cited the opinion of the late Sir Robert Peel, expressed on the proposal for the repeal of the hop duty, that if the hop lands were applied to the growth of wheat, it would be much more beneficial to the country, because to that extent it would increase the food of the people.

Mr. F. REYNOLDS called attention to the waste of fisheries in this country, the people not seeming to realise the value of fish as food. There was a great deal of fishing at improper times, and a misuse of the fish as an article of manure, when it might be more advantageously brought into the market for human food.

Mr. R. DENNY URLIN thought it desirable to point out that a previous speaker (Mr. Hudson) had fallen into an error in attributing the Irish famine in 1846 to a failure of the grain crops. Barley and oats were to some extent cultivated in Ireland, but the corn crop had always been very limited, and the climate of Ireland was so uncertain that it never had been, or would be, a corn-growing country. The great Irish famine was owing to the failure of the staple crop of potatoes, on which the majority of the smaller tenants had, as it were, staked their existence. When that crop failed there was universal distress, for the tenants were thrown into a state of starvation, and were of course unable to pay any rent; so that the land-owning class also suffered fearfully. It was happily the case that the average size of farms had since increased, and that the tenantry were not now so completely, as formerly, dependent on a single crop. If he understood the Indian Famines rightly, they were also terrible instances of the danger of depending on one product of the earth. All this seemed to point to the scarcity, in India as in Ireland, of agricultural knowledge, and of the means of making known to the people the dangers to which they were liable to be exposed. We had no "Minister of Agriculture," whose department would be charged with the duty of warning the poorer tillers of the earth of possible reverses, and especially of the danger of staking everything on one article of food. Such a department of State might, he thought, ameliorate, if it could not wholly prevent the disastrous state of famine which had overwhelmed some portions of the empire in years past. With regard to the meteorological aspects of the questions, he feared that meteorology, although highly interesting, could not yet claim to be looked on as a science. The cycle of bad harvests spoken of by a previous speaker would doubtless be of great importance if anyone could succeed in exactly measuring it—in telling us if it were a cycle of ten, or twelve, or fourteen years. But cycles and sun spots so far defied exact description, and any knowledge we had of them was, so far, of little or no use to us. He would only, in conclusion, express his great regret that he had not been able to hear the whole of Mr. Walford's paper.

The Rev. I. DOXSEY combated the view that the climate of Ireland was unsuitable for the growth of corn. Some of the heaviest corn and the strongest in the straw he had seen in the three kingdoms, was grown on the estate of Earl Fitzwilliam on land that had previously been bog land. He believed that drainage would do for Ireland what it had done for the great level in the fen counties of England, which were the best grain-growing counties in the kingdom. The cost of reclaiming the land in Ireland was the chief difficulty. The Irish famine in 1846 was relieved, as far as it could be, by the importation of corn from America. The people found that they could no longer exclusively rely upon the potato crop, and he believed they had profited by the lesson ever since. He could not remember accurately the facts to which Mr. Hudson had referred, but his conclusion at the time of the Irish famine was that as much grain as was necessary to sustain those who perished by famine was turned into whisky. He felt personally indebted to the author for his paper. The facts had been collected by surmounting almost insuperable difficulties, and exhibited an indefatigable industry which was worthy of imitation by the younger members of the Society. He (Mr. Doxsey) took exception to the remarks made by Mr. Patterson in reference to the debased currency. The foreigner did not accept our currency, but regarded only the actual and not the nominal value of the silver, and sold accordingly. Therefore he thought that the debasing of currency had more to do with the question than Mr. Patterson seemed to imagine. With regard to the meteorological aspects of the question, he thought that one part of Mr. Patterson's speech answered the other. That gentleman had said that there were certain circumstances which in northern climes produced scarcity, and that there were other classes of circumstances producing famines in southern climes; but these two circumstances did not always go together. As a rule it would be found that when there was a scarcity in the northern climes there was a good supply in the southern climes, and *vice versâ*, showing that Mr. Walford was right in saying that one of the causes of famines was want of the means of transport. Putting these two facts together, he thought that Mr. Patterson's remarks rather strengthened Mr. Walford's argument than weakened it.

Mr. H. MONCREIFF PAUL said that Mr. Walford had alluded to India as an important factor in shipping wheat to this country; but if he would carry out his investigation to last year (1878), he would find that considerably less had been sent from that country than was the case in 1877, or even in 1876, one reason simply being the effects produced by the famine, and another the low price offered in this country not being sufficient to warrant the shipment of grain hither. Mr. Walford had shown what he considered to be the means of preventing famines in the future, and had summed it up by saying, "I have already indicated that the only mode of permanent prevention lies, in my belief, in improved means of cultivation, if practicable, and of transport as a necessity." He (Mr. Paul) thought, however, that there were four elements

involved. The first great factor was free trade. If there was free trade in any country there would never be famine, because supplies could be attracted to that country from other countries. A second factor was increased facilities of transit; a third, telegraphic communication; and a fourth, improved cultivation. It was quite true, as some of the speakers had remarked, that Ireland as well as Scotland were not great wheat growing countries; but that was not of much consequence, because wheat could be imported much more cheaply from other parts of the world. If the principles he had enumerated were applied to other countries, there would be no danger of famine in them. With regard to India, there was another element to be considered; there was the question of caste. An Indian would rather die than eat food to which he had not been accustomed. In the case of coolies sent from the East to the West Indies, they must have rice imported from India or Burmah for their consumption; consequently this element of caste, where it existed, was sufficient to counteract the other elements he had named; but, speaking generally, a maintenance of the four points to which he had alluded as applicable to this country, was necessary to prevent other countries from being visited by famine.

Mr. E. HEPPLÉ HALL said the paper just read was a most admirable one. He was present when the former paper was read, and he had studied its contents ever since. Notwithstanding the wonderful ingenuity Mr. Walford had displayed in handling the figures, he (Mr. Hall) confessed to some feeling of disappointment with the general results arrived at. There was one element which had not apparently entered into the consideration of the paper, namely, that of thrift, or rather its opposite, waste. There was no time when the subject of thrift or waste was more worthy of consideration than at present. Next to the Americans, the people of this country were the largest meat consumers in the world, and next to them, perhaps, they were the most extravagant and wasteful; and he had no hesitation in saying from the experience he had in travel, that this element of waste entered very materially into the consideration of the question of famines. In regard to the question of free trade, he could not conceive, although he largely believed in free trade, how it could affect the question of famines. If there was universal free trade, no doubt the supply to the north when the south was not so distressed, and *vice versâ*, on the general principle of the working of free trade, would be the means of relieving a famine. So in relation to the whole world, it was a local question, apart altogether, he thought, from free trade. He had spent some time in the United States, and had learned that many portions of the country were subject to periods of famine and great scarcity; but since the introduction of railways and canals these famines had been in a great measure prevented. He was of opinion that the paper, on the whole, was one of the most elaborate, valuable, and carefully prepared that had ever been read before the Society since he had become a member.

Mr. F. C. DANVERS said he had taken great interest in the

famines in India. He wished in the first place to correct the statement that rice was the all-important food for India. In many parts that was so; but in southern India rice was really the food of the rich, the poorer classes depending on the dry crops. If they all depended on rice, the effects of the drought would be much more serious, because rice required a great amount of water to bring it to perfection. In regard to opium growing in India, opium covered a comparatively small area, so that the cultivation of grain in its stead would not have any material effect on the country in times of famine. In China the case was different. The late famine had directed attention to an amount of surreptitiously grown opium in that country. Between rows of growing crops the Chinese planted the poppy; but when this was discovered by the authorities they were punished and the plants destroyed. It was believed that the large amount of opium grown in China monopolised the ground which would have otherwise been covered with grain, and which would have been very beneficial in the time of the late scarcity. Poppy cultivation in India, however, was not carried on to an extent sufficient to affect the food supply in any particular district. Owing to a new condition of affairs that was gradually taking place in India, famines would probably in the future assume quite a different aspect to what they did formerly. Famines in India have hitherto been more generally famines of work than of food, because when there had been good crops the people used to store a very large proportion of the year's supply in underground storehouses, and very often they had sufficient to last at least one year of bad crops, and if the crops were not entirely destroyed, there would be sufficient in store to eke out for two seasons. Upon these occasions the famine was not a famine of food, but of work; because a large proportion of the people were agriculturists, and when a drought took place, and it became impossible to cultivate the land, a large proportion were thrown out of work, and had no means of livelihood to enable them to purchase food; but since communications had increased, a great change had taken place in that respect. In many places where a railway passed through, and a high price could be obtained for the grain, the grain merchants were not proof against the temptation to realise money when they had the opportunity. The consequence would be that by and by famines of food would be almost impossible, but famines of work, and therefore of the means to procure food, would not therefore cease to exist. The product of districts having a large produce, would be brought into the famine districts at a much more reasonable rate than hitherto. He was sorry that more had not been said in reference to the government dealing with famines. A famine in this country was almost impossible, but our dependencies in the East might be largely increased in future, and it was desirable that we should consider the best way of meeting a famine. In former years the government in India used sometimes to purchase grain, and when they employed people on famine works they would pay them in grain, and otherwise interfere with the grain trade. Early in the present century that was found out to be a great mistake, and although there had been departures from the

general rule, orders were issued that there should not be any interference on the part of local governments or their officials in the grain trade. As communications improved, the free trade in grain would have greater security than in times when it was impossible to get into districts in various parts of the country. There was also another question with reference to communications. One effect of railways was not only to facilitate the transport of grain from one place to another, but they also had the effect of raising the value of grain, and in a calculation which he recently made, he found that if a certain railway which had been projected was constructed at a cost of about three-quarters of a million sterling, in all probability, judging from the prices of crops in another district, the value of the crops would be increased by 800,000*l.* a-year; that was to say, the increased value of one year's crop would more than pay for the railway. The people would thus be enriched and able to put aside from their surplus receipts money to provide themselves with food in the event of scarcity in their immediate districts.

Professor SELIGMANN (of Berlin) said that a few days ago he read in the "Illustrated London News" an account of a case in which a somewhat speculative commercial gentleman predicted a famine in the year 1641, the time of the Irish rebellion, and he attributed the cause to emigration, which was an important element in the question.

The Hon. Mr. WASHBURN (of the United States) said he had read with a great deal of interest the first paper prepared by Mr. Walford, and he was astonished at the number of famines that had occurred from the beginning of creation to the present time. These famines, undoubtedly, were in most cases beyond the power of human control and foresight; but there was no question whatever that the distress caused by some of them might, in many respects, have been mitigated, and made more bearable by human skill and ingenuity. He had listened with a great deal of attention to the discussion which had followed the reading of the essay, and had asked himself the question whether it would be possible for these famines to be repeated in future times. It did not seem to him that they could, when he considered the present means of communication between one country and another, and the improvements that had taken place within the last thirty or forty years in all that related to the cultivation of grain, especially in America, which country was a great factor in supplying the world with bread. During the past year America had raised the greatest crop of wheat ever known, exceeding, if he remembered rightly, *four hundred millions of bushels*! He also called attention to the very extensive growth of Indian corn in America, which, he said, was comparatively but little known in Great Britain. He had been gratified to know from recent travels through Germany, that it was being largely introduced into that country. America raised such enormous quantities of that article so cheaply, *that it had actually been often used in the Western States for fuel*. It was

excellent fodder for cattle, and was eaten extensively in the form of Indian meal by the masses of the people. If it were introduced into Europe, it would be used to a great extent as an article of food, not only for cattle, but for human beings. Now-a-days we were blessed with extensive means of inter-communication. Seventy ships were now on the stocks in the shipyards of England and Scotland, which were being fitted up expressly for the purpose of carrying cattle from the United States and Canada to Great Britain. If nations were neighbourly one with another, he felt confident that there would be an end of famines; at least, that their deplorable consequences, should they occur, would be greatly mitigated.

Mr. WALFORD, in reply, said that the discussion showed that although he had tried to exhaust as well as he could the main topics, there were many others that had been left untouched by him. In regard to the remarks made by Mr. Patterson, as to the currency question as a cause of famine, he confessed that when he first saw it stated in numerous instances scarcity of coin had produced or aggravated famines, he was very sceptical. He had, however, dealt with the question historically. He had shown the legislation that had taken place in this country in regard to the debasement of coin; and this debasement being admitted, its influence upon the price of food purchased from the foreigner became apparent. He had also quoted the authorities bearing upon the question of currency and food supply. He regretted that he had been compelled to wander into the question of currency, because it was not a very agreeable one, by reason of the contrariety of opinions it always engendered; but he was obliged to do so in order to complete a very important section treating of the causes of famine. Professor Levi's question about opium cultivation had been answered by other speakers. Mr. Hudson had made some remarks as to the misapplication of grain; but he had overlooked the fact that he (Mr. Walford) had given a table in his paper relating to that very subject. In the same table there was a curious fact that had not to do with the liquor traffic at all. The rooks, choughs and crows were at one period so numerous in this country, that they not only destroyed the corn of the country, but also the roofs of houses and barns, and a reward was offered for the number of rooks that were destroyed. He quite agreed with Mr. Reynolds that the fisheries of this country had been neglected, but in looking at Tables IX and X it would be found that it was not a new question, even in a famine point of view. Many Acts of parliament had been passed encouraging the fisheries of this country, and ultimately (1801) the Government granted 30,000*l.* a-year by way of bounty to bring in the fish for the poor people of the country. Some of the Acts of parliament relating to this subject were so curious, that unless one actually saw them they would be believed to be part of a romance. The question of fisheries had not been neglected by him (Mr. Walford) in considering the question of famines; but it was a question that had been neglected in the consideration of food supplies generally, especially as regarded Scotland and Ireland. If fish and Indian corn and

other products that were to be found plentifully in many parts of the world were used in this country, there would be no danger of lack of cheap food for the poor people. One question in regard to famines was what were the food supplies that ought to be introduced in the time of famine. In reply to Mr. Denny Urlin's observations on the famines in Ireland, he might say that until 1806, there was no reciprocal law for the import of grain into, or the export of grain from, the two divisions of the kingdom.

There were many laws passed for the prohibition of food supplies between the two countries; but in the year mentioned these were all swept away, and at the present moment a very large amount of grain was annually imported into this country from Ireland. Mr. Doxsey had also referred to Ireland and the capacity of the bog lands, when cultivated, for producing grain; and to him (Mr. Walford) it did not seem clear at first sight why America should be relied on to such a large extent for our supply of grain, when it could be obtained from places much nearer home, except that America produced, owing to the climate, a drier and finer grain. In regard to the remarks made by Mr. Paul, who made a point of telegraphic inter-communication as an important element in regulating the supply of food at famine periods, he (Mr. Walford) admitted the advantage of this agency, and in his paper had taken it for granted as an agency now existing. Mr. Hall had given some interesting statistics, and had called attention to the waste of food. If this waste was prevented, there would be no such thing as absolute poverty in England. Mr. Danvers had spoken with the authority that belonged to the position he held in the India Office, and had convinced him (Mr. Walford) of the folly of himself or any other outsider attempting to pronounce authoritatively on the remedies for Indian famines. A knowledge of the circumstances of the country was an essential condition in all Indian problems. Professor Seligmann had spoken of migration, and it had been remarked by Mr. Danvers and others that some of the famines in India, if not attributable to, were very much aggravated by the inhabitants migrating from one district to another. The Hon. Mr. Washburn had given some information in regard to the Indian corn of the United States. In this paper he had felt some difficulty in regard to the word "corn." In England this term was applied to all grain, in America to one variety only, namely, "Indian corn;" but this latter term became confusing in a paper treating of Indian famines; for Indian corn was peculiarly the produce of the continent of America. It was sold for a very low price, and properly cooked was a most nutritious article of food. It would be well if this could be designated "maise." He commended this suggestion to his able statistical friend (Mr. Bourne), who did him the honour to occupy the chair this evening. Some disappointment had been expressed that the present paper treated the famine question on a different standpoint from the previous paper. In the former paper he had treated of the natural causes of famine, and in the present one he had treated of the artificial causes. In the nature of things the treatment must be quite different. What were termed the natural

causes of famines were frequently in some degree amenable to wise and preventive treatment; but the artificial causes all arose either from want of human foresight, or from the passions and prejudices of mankind. Legislation was supposed to embody the aggregate wisdom of a nation; but in the matter of famines, as in many other social problems, it was frequently very much the other way. He was much obliged to the gentlemen who had taken part in the discussion; he saw others present who could have thrown light upon some of the questions involved; but diffidence or want of time had prevented their doing so. As the population continued to increase, the famine question would continue to force itself upon the consideration of all thoughtful men.

Mr. S. B. GOSLIN, author of a pamphlet, "How to avert Famines and Droughts," was called upon to speak after the reading of the paper. He has since sent in the following notes:—

C. WALFORD, ESQ.,

"After having heard and read your valuable and exhaustive paper upon Famines of the World, I would remark that (1) I consider that you have supplied fully all that could be desired for the consideration of how to avert or mitigate them. I tried to get such a table for reference, but failed some long time since. (2.) It is from this conclusive that famines not only arise from various causes, but from the fact of locality, the causes of one locality being entirely different to those of another. (3.) That they will occur again and again, whether from the spots on the sun, cycles, or other meteorological disturbances. (4.) To avert or mitigate them must be a study of particular circumstances and particular remedies, as much the occupation of the civil engineer as the agriculturist or meteorologist, the remedies needed often being within the scope of the civil engineer, as has been illustrated in the facts of the reclamation and utilisation of the fen lands.

"There can be no doubt but that much may be done by scientific inquiry and investigation as well as by the compilation of further statistics.

"It is said we wish that some plans might be suggested to government for India and the colonies, to save the population in one case and the sheep in others.

"If Ireland were taken into consideration, it has been shown by James Price, C.E., at the British Association, that they have an enormous natural power wasted which might easily be utilised for draining and bringing the land into a better state of cultivation.

"In India and the colonies it is nearly always the want of water which causes the calamity, which might be obtained from under the surface, and raised by the wind. To settle this point it needs a careful compilation of (1) the statistics of the wind all over India and in the colonies; (2) of the average depths of the wells or water-bearing strata in same parts, together with suitable sites for wind power; (3) of the waterfalls which might be utilised so as to save the employment of the vast number of cattle in raising water in times of scarcity—eating the food from the land.

“Such statistics would be of immense service to Government and colonists, and would further the possibilities of prevention.”

The CHAIRMAN in moving a vote of thanks to the author of the paper for the amount of information that had been arranged in such an interesting manner, referred to the observations of Mr. Washburn, cordially endorsing his opinion that extended intercourse and kindly feeling between different nations in the interchange of their commodities, would tend to preclude any one of them suffering from severely continuous famine. He must, however, remind his friend, that the fault lay with the Americans, inasmuch as whilst England was ready to purchase the food they had to supply, America was unwilling to take payment in the articles she had to give in exchange. He warned Mr. Washburn that unless his countrymen manifested a better spirit in this matter, it would be incumbent on the Government and capitalist on this side of the Atlantic, to stimulate industry and develop production in countries such, for instance, as Africa, who might be willing, not only to supply us with food, but to take our clothing and goods in exchange.

MISCELLANEA.

CONTENTS :

	PAGE		PAGE
I.—Financial and Commercial History of 1878	276	V.—University Boat Races and Sun-Spot Cycles	328
II.—Prices of Exports from 1861 to 1877	305	VI.—A suggested Coincidence with reference to the Death-Rate	330
III.—The Fires in the Metropolis during 1878	322	VII.—Notes on Economical and Statistical Works	331
IV.—English Literature in the Year 1878	325	VIII.—Additions to the Library, with Notes	334

I.—*Financial and Commercial History of 1878.*

THE following is taken from the supplement to the *Statist* of the 1st of February, 1879 :—

“ *The Bank Failures—A Crisis Probable—The Cotton Crisis—Coal and Iron Trades—The Agricultural Interests—Miscellaneous Trades—Character of the Year’s Trade—The New Fall in Silver—Resumption in the United States—The Protectionist Revival—Money and Trade in 1878—The Crops—Foreign Trade in 1878—American Economy in 1878.*

“ The business history of the past year is a record of disappointed hopes, of shrinking trade, of falling prices, of lowered wages, and of financial disaster, ending as the twelvemonth drew to a close in serious distress among a portion of the population. The long depression which began with the panics in Vienna and New York in 1873, had deepened year by year. Having its origin in the excessive lock-up of capital in the construction of railways, especially in America and Germany, many of which, when built, had neither population to use them nor traffic to carry; in the wild speculation that followed the German assertion of supremacy upon the continent; in the exaggerated armaments, which withdrew an inordinate amount of labour from productive industry and over-weighted the taxpayers of the great European nations; and in over-production in the principal trades in all commercial countries; it was aggravated by a succession of bad harvests in both hemispheres; by famines in the East and in South America; by repudiations by Governments and other public debtors; and by the political anxieties which the reopening of the Eastern Question gave birth to. Twelve months ago it had reached a point which then seemed almost as low as it could go. Enterprise was suspended, for no one knew what turn events might take. There was scarce any demand for money, which accumulated in the deposit

banks, and in consequence, notwithstanding the preparations of the United States for resumption, and the resulting scarcity of gold, the Bank rate in the second week of January was reduced from 4 to 3 per cent., and shortly afterwards to 2 per cent. In the meantime the Russians, so long checked by the gallant resistance of the Turks, had established their superiority in the field, and were in full march upon Constantinople, driving the Ottoman forces everywhere in headlong rout before them. Their victory increased the apprehensions of Europe, which were rendered acute by their attempt to exclude the other Powers from participation in the terms of the peace, and by the publication of the conditions of the San Stefano Treaty. England prepared to assert her right to a voice in the settlement. Then followed in quick succession the entry of the British fleet into the Dardanelles, the vote of credit by an immense majority, Lord Derby's resignation, the calling out of the Reserves, and the dispatch of the Indian contingent to Malta. War seemed imminent, and there was a semi-panic on the Stock Exchange, more particularly in Russian Stocks. After a while, however, Russia gave way. Count Schouvaloff's journey to St. Petersburg was everywhere interpreted as an acknowledgment that Russia could not afford to fight, and from that moment hopes were entertained of a speedy revival of business. The publication of the Schouvaloff-Salisbury agreement gave new strength to those hopes. And when the Congress actually met, and peace was preserved, a very sanguine feeling manifested itself. Upon the Stock Exchange there was an outburst of speculation, and several foreign and colonial loans were launched, indicating the opinion of a shrewd and well-informed class that a period of activity was about to set in. Nor were there wanting grounds for the expectations, apart altogether from the Berlin Treaty. Agriculturally the year was good. The quotation from the *Mark Lane Express*, which will be found among the extracts we append, seems to establish that the wheat harvest which was not as favourable as was reported at the time, was, at the outside, an average one; and that the yield of barley was below the average; but all other crops were remunerative, hay and grass being exceptionally abundant and in excellent condition. Thus the prospects of the farmers were improved. In America likewise the harvests were better than had ever before been known, and, as a result, wheat became unusually cheap, making up to the working classes for the fall of wages. The cost of production, too, in most trades had been greatly reduced, and in the United States, our most important foreign customer, the signs of rapid recovery were manifest. Suddenly the prospect was darkened by a disaster which incalculably deepened the depression.

The Bank Failures.

"On 1st October the City of Glasgow Bank closed its doors. There had been no run upon its deposits, and no alarm among its noteholders. On the contrary, only a couple of weeks before its shares had been quoted almost as high as those of the Bank of England itself. Its failure, therefore, was wholly unexpected, and

gave a shock to credit throughout the length and breadth of the land, which was intensified by the disclosures that followed. In actual fact it would seem the concern had never been solvent. It suspended in 1857, and although set going again, it never recovered ground, and was always looked shyly upon by the other Scotch banks. But in the West of Scotland it had done a large business, and retained a high popular reputation to the last, its liabilities to the public at the stoppage proving to be 12,000,000*l.* It was by the refusal of the London houses to discount its acceptances that it was in the end brought to a stop. Systematically, and for a long series of years, it had been engaged in bolstering up the firms of its own directors, their friends and connections—firms which it knew to be bankrupt, and some of which were anxious to declare themselves so, but were compelled by the bank to go on. To sustain this astounding misappropriation of the moneys entrusted to it, it manufactured bills in the most reckless manner, sending them out in books at a time to the East, Australia, and New Zealand, and getting them discounted sometimes directly, sometimes through the agency of dummy houses. At last the bills were refused discount in London, and the fraudulent game came to an end. To keep it up so long the grossest deception had been practised on the shareholders and the public. The deposits and acceptances were largely understated in the published accounts, the advances made without security of any kind to persons known to have been bankrupt for years were represented as good debts, mere trash investments were valued at large sums, and securities really worth something were enormously over estimated. The gold which ought to have covered the note issue was spent and false returns deliberately made, and bills entrusted to it for collection were discounted in London and the proceeds appropriated. In the result the paid-up capital and the reserve fund were made away with, and in addition the liabilities were found to exceed the assets by over 5 millions; so that the total deficiency amounted to 6,641,000*l.* of which over 5½ million pounds is accounted for by advances to four firms alone. The firms which had been so long kept afloat by the bank instantly suspended, and there were a few independent failures, of which that of Heugh, Balfour & Co. was the most important. The effect upon the money market of the Glasgow stoppage was great and immediate. If frauds of the kind and magnitude thereby brought to light were possible, men knew not whom they could trust. The banks all over the country instinctively felt the necessity of strengthening themselves to meet any trials that might be in store for them. It became difficult to obtain accommodation. The Bank of England raised its rate to 6 per cent., and the open market followed. After a while, however, the alarm began to subside and ease was returning when the Rochdale Bank failed, owing to speculations in stocks by the managing partner, who was under debt to the bank for advances to the extent of half-a-million. The bank's deficiency was about 200,000*l.* A day or two later the Caledonian Bank, a concern in the north of Scotland with a paid up capital of 150,000*l.* and holding 1½ millions of deposits—was obliged to close its doors. It

was a perfectly solvent and well-managed institution, but having had the misfortune to acquire four Glasgow Bank shares, it became liable to the full amount of its shareholders' possessions for the debts of that concern. The enormous claim made upon it by the Glasgow liquidators deepened the impression of the ruin which the liquidation would cause in Scotland. Scarcely was the last of these failures a week old, when the West of England and South Wales District Bank suspended, with liabilities of about 5 millions, the cause in this instance being the lock-up of capital in local coal and iron works. A run upon deposits took place, and the bank having vainly applied for assistance in London, was compelled to close its doors. Although it did not fall strictly within the year, we may close our list of bank disasters by mentioning that in the first day of January another private bank—the Cornish—closed its doors. Omitting this event, which has had little influence outside West Cornwall, the total deficiency of the City of Glasgow, Fenton's, and the West of England Banks amounted to about $5\frac{3}{4}$ million pounds. The loss of capital, the inconvenience caused to depositors, and the hardship inflicted upon shareholders, were, however, but part of the mischief done. More widespread, if not serious were the sense of insecurity everywhere occasioned, and the consequent shock to credit. Shortly after the Glasgow failure the Bank of England, as we have already said, raised its rate of discount to 6 per cent., but lowered it to 5 when confidence began to revive. It did not put it up again formally on the revival of apprehensions, but it refrained from doing so only to avoid intensifying the crisis. In fact, it accommodated few at the published rate, and as much as 7 per cent. was charged for advances. The private and joint-stock banks all over the country restricted very seriously the accommodation they afforded their customers, and throughout every branch of trade there was, in consequence, a marked diminution of business done. The effect in aggravating the distress, which in the midst of the crisis began to be felt in the large towns, was direct and very great.

A Crisis Probable.

“But while it is important to understand the influence of the bank failures in checking the incipient revival of which there were symptoms in the early autumn, and in intensifying the prevailing depression, we must not lose sight of the fact that a crisis of some kind was probable. On that point the extracts from trade reports and the statistics, which we append, will satisfy every careful reader. Since 1866 there had been much reckless trading, many losses had been suffered, and firms which were really insolvent were glutting the markets with unsaleable goods for the manufacture of credit, and thus preventing the legitimate trader from earning the profits without which he could not carry on his business. It was necessary that there should be a liquidation, that the ground should be cleared and the air purified. In 1875 there had been a partial clearance, but the work was not carried through, and had to be resumed and made complete. The crisis thus clearly probable took the form it did, because the banks had in several instances stepped

outside their proper sphere, and engaged in business for which they are not adapted. In the majority of cases the deviation from the right course was not carried far, but the City of Glasgow Bank violated every rule of sound banking, linked its fortunes indissolubly with houses which had been participants in the reckless trading of which we have spoken, with men of straw, and with unscrupulous adventurers. Its fate was certain, and its downfall brought after it such other banks as for one reason or another were not in a position to bear a severe strain upon their credit. Independently of this bank crisis, however, it is to be noted that a commercial liquidation was going on. The statistics of bankruptcy during the year, prepared as usual by Mr. Richard Seyd, establish the fact beyond the possibility of a doubt. The number of failures officially announced amounted to 15,059, against 11,022 in the preceding twelvemonth, an increase of 36.6 per cent.: and the suspensions were pretty equally distributed over the several months, though there clearly was an augmentation in November and December. A brief review of the leading industries of the country will bring out clearly the real character of the period through which we have been passing.

The Cotton Crisis.

"The American Civil War, by cutting off for four consecutive years the supply of raw cotton from the Southern States, had not only given time for clearing off the surplus stock of goods previously accumulated, but had created an actual scarcity. Prices accordingly rose to an unprecedented height, and fortunes were rapidly made. Capital eagerly rushed into a business so exceptionally fortunate, and during the ten following years there was a rivalry among nations in the building of mills and the multiplication of spindles. We have in several articles shown the magnitude of this movement, but we may say here that between 1869 and 1877 the number of spindles—that is, the potential producing power—was increased 50 per cent. And this augmentation of producing power took place everywhere—at home, on the continent, in America, and in India. The same causes which led to this effect induced also a vast extension of the cultivation of the cotton plant in India and Egypt, in Australia and South America. After a while, too, peace and order were restored in the Southern States, cotton growing was resumed on the old scale, and thus the supply of the raw material overtook, or very nearly overtook, the capacity of manufacture. Prices fell and consumption was stimulated, but gradually consumption began to lag behind production. The void that had been occasioned by the American civil war was filled up, and the restriction of the purchasing power of the nations of the world, to which we have already referred as manifesting itself in 1873, began to tell seriously. The continent and the United States, by protective tariffs, either shut out British trade altogether or cramped and stunted its growth, and a sickly growth of native manufactures was developed. When poverty ensued, there was found to be a plethora of goods everywhere. At this moment the depreciation of silver and the famine in the East came to aggravate the situation; the

former, by destroying the profits of the export trade to India and China; the latter, by depriving the Eastern populations of the means of buying clothing. The famine had in this way by far the most powerful influence. When vast populations are dying by hundreds of thousands from actual starvation, when they are obliged to part with everything saleable to get food, and when their cattle are perishing with them, trade in non essentials must necessarily come almost to a standstill. To keep themselves alive is more than many can do, is all that the great majority think of. Nor is it only in the districts immediately affected that this happens. The construction of railways has now brought the markets of every Indian province within reach of the agriculturists of the rest, and when in any part of the empire there is famine, the price of food consequently rises in all until it presses on the incomes of the working classes, and grievously diminishes the margin out of which is made the expenditure on other than the necessities of life. To the fall in the prices of grain which is now occurring in India, we may therefore look as one of the principal means of imparting a healthy activity to the great staple trade of Lancashire. There was still another cause of the badness of that trade. A number of houses, which had suffered disastrous losses in their blind anxiety to postpone suspension, continued to export to the East long after the markets out there were glutted. It mattered not to these houses that the prices they obtained were ruinous. The export of goods enabled them to draw bills, and to raise money on them. By virtue of the six months' usance, they were able to provide for them before they fell due by the manufacture of other bills. Thus the trade was unduly depressed, and the legitimate trader deprived of his profits. It is to be hoped that the Glasgow Bank catastrophe has put an end to this evil at any rate. The result of all these disturbing influences is a crisis more severe than has been known to the present generation of manufacturers. The price of the raw material is lower than it has been for twenty years, but the price of the manufactured article has fallen still more extremely, and the consequence is that the difference between the two—the margin of the manufacturers' profits—is smaller than ever before. For the details we refer our readers to Messrs. Ellison's report, a summary of which will be found among the extracts at the close of this history. Already in 1877 the complaint was general that the cost of production ate up all the profits, and with the beginning of the past year matters became worse. Mills began to run short time, several stopped altogether, still the situation did not improve. Then the millowners of North and North-East Lancashire gave notice of a 10 per cent. reduction of wages, which was resisted by the operatives, and gave rise to a strike which was obstinately maintained, and before it ended was disgraced by riots in Blackburn and other places, which revealed a most unsatisfactory state of feeling between employers and employed, and furnished evidence that the moral progress of the country during the past quarter of a century of unprecedented prosperity has not been equal to the accumulation of wealth. In the long run the reduction of wages had to be conceded, and in some other places the result of the

struggle was accepted as decisive, and the notices of the employers were acquiesced in. Short time became more general than before, and the number of factories closed multiplied. Yet still in the closing months of the year another reduction of wages was generally demanded, and was resisted in Oldham, where a lowering of 10 per cent. had not long before been exacted after a protracted struggle. The strike which ensued was, however, unsuccessful, and the process of adjusting wages to prices still goes on. Let us hope that it is now nearly completed, and that the cost of production being sufficiently reduced to leave the manufacturer his reasonable profit, a revival of activity will not be long delayed.

The Coal and Iron Trades.

“The depression which has so long prevailed in the coal and iron trades continued throughout the past year. The excessively rapid construction of railways between 1868 and 1873 developed an unhealthy activity in these trades. The then existing supply was not sufficient to satisfy the demand, and the same result as we have been tracing in the cotton industry followed. Prices rose to nearly double the former level, capital flowed into the trade, new mines were opened, new works were built, and in every way the producing capacity was immensely augmented. The railway mania came to an end, and the demand for iron suddenly fell off; coal, of course, sharing the same fate. The works badly situated, uneconomically worked, or in any way labouring under disadvantages, were gradually stopped; wages, not without severe struggles, were reduced, and better processes were widely adopted. Still the prostration became more complete. Prices continued to fall, until they were on an average last year little more than half what they had been in the inflation period. And, as a matter of course, iron and coal properties suffered an enormous depreciation. In an article some months ago we traced the extent of this depreciation in the case of several important iron companies, and we found that in not a few instances it reached 60 and even 70 per cent. It was not alone over-production which brought about this state of things. There is a revolution going on in railway equipment, which is apparently destined before long to be extended also to shipbuilding. Such extraordinary improvements have of late been effected in the manufacture of steel that the article is now but little dearer than iron, while its durability, resisting power, and lightness are so much greater, as to make it far preferable for rails and ships. There has not yet been experience enough to determine the life of a steel rail, but many authorities estimate it as high as six times, and some even at nine times the life of an iron rail. Whether these calculations are exaggerated or not, it is certain that steel bears the wear and tear of traffic much longer, and therefore it is taking the place of iron almost altogether upon our railways. The old works constructed for the manufacture of iron rails are consequently idle, the machinery is rendered useless, and the capital invested in it is wasted. There is no reason to doubt that the country will assert in the steel industry the pre-eminence it has so long maintained in the iron, but while the necessary transformation is being effected

there is extreme depression and much suffering in the iron as well as in the coal trades ; while important districts are threatened with a permanent loss of prosperity.

The Agricultural Interest.

“ The agricultural interest was hardly more prosperous in 1878 than the coal, iron, and cotton industries. When the year opened the country had suffered from three bad harvests in succession, from deficient hay and root crops, and from cattle disease. Farmers were unable to make up for their losses by a great enhancement of prices because of the recent importations from abroad, and more particularly from America. The consequences of the panic of 1873 had been to bring about a great reduction of wages and a great diminution of manufacture in the United States, which drove the working classes in large numbers westwards in search of a livelihood. They settled down upon the soil of the fertile Western States and territories, and raised enormous quantities of corn and cattle, which they exported to Europe. The blockade of the Russian Black Sea ports during the war prevented the full effect of this diversion of labour in America from being immediately felt. But with the return of peace it at once became manifest. As it happened, too, the American harvest last year was unusually abundant. Grain, therefore, of all kinds continued to fall during the twelvemonth ; in the latter half it sank to a lower point than it had reached for a generation. And the price of meat also, though not equally affected, was moderate. Farmers, indeed, were favoured with a better harvest than in the three preceding years, and the green crops—grass and hay—gave excellent results ; still, the improvement was not enough to compensate for former losses. It appears now, as we have already said, that the wheat yield was less than had at first been supposed. Mr. T. Scott, for example, estimates that, when seed is deducted, the total home produce available for consumption did not exceed $10\frac{1}{2}$ million quarters, which at existing prices would return the farmer barely 6*l.* 5*s.* an acre—a sum, in Mr. Scott’s opinion, that would leave little or no profit. The difficulty to find eligible tenants for vacant farms, which had been experienced in 1877, continued through the past year, the demand for a lowering of rent made itself heard universally, and was very generally accorded, and a movement began for the reduction of wages. In Kent and Sussex there was resistance and a strike, but the time was unfavourable to the labourers, and the fall of wages is still going on. The depressed condition of the greatest of our industries during so long a period has contributed largely to the bad trade universally complained of, the agricultural population being no longer able to purchase the usual quantities of goods from the towns. A restoration of its prosperity is therefore of the first importance to trade. To bring it about, the character of the seasons is undoubtedly the most material condition ; but it is also certain that during the past quarter of a century the rise both of rent and of wages has been excessive. Mr. Caird has shown that conclusively. The rise was determined, not by the profits of farming, as, to be legitimate, it ought to have been, but

by extraneous circumstances, such as the demand for land generated by the growth of the towns, and the large fortunes realised in trade upon the one hand, and, on the other, by the demand for labour for industrial pursuits. A readjustment of the farmer's expenses to his returns is now requisite. High prices are not to be expected in future, and to the masses of the population would be most injurious. The course of events during the past quarter of a century has, on the contrary, tended to equalise prices all over Western Europe, and in a less degree all over the world, lowering them in England, and raising them elsewhere. The tendency will continue; and therefore, if the British farmer is to hold his own, there must be a reduction of his fixed expenses.

The Miscellaneous Trades.

"The other trades of the country need not be described in detail. During the year their characteristic has been quietude. The textile industries, for example, and the metal, other than those noticed above, have neither been prostrate like cotton, coal and iron, nor have they been prosperous. That they have shared in the general depression, the extracts from trade circulars which we reproduce along with this supplement, leave no room for doubt, but they have done so only to the extent of checking progress. They have, in a word, been stationary. And the same description applies to the vast multitude of miscellaneous trades. Take shipbuilding, for instance. There has not been the feverish activity visible a little while ago on the Clyde, the Tyne, and the Tees. The price, too, has been low, and the profits presumably have not been large. Still a very considerable amount of work has been turned out; in some districts there has been actual progress. Though freights have been low, and cargoes not abundant, shipowners have confidence in the future. They, therefore, availed themselves of the momentary cheapness to prepare for the outburst of activity which will ensue by-and-by. The railways, again, were not highly prosperous. Yet the traffic on the passenger lines grew in spite of the bad times, and, with one or two exceptions, as will appear from a table in the appendix to this history, did not seriously fall off even on the mineral lines. Taken as a whole, their prospects would be fairly satisfactory were it not for the continuous increase of the capital expenditure. From the investor's standpoint that is a matter for anxiety, but from that of the economist it is not so, at least it is not wholly so. A portion of that expenditure, doubtless, is unnecessary, but the greater part will unquestionably augment the efficiency of the railways. The substitution of steel for iron rails, for example, is immediately costly, but in the long run it will prove economical by diminishing the charge for repairs. So likewise, the outlay incurred in introducing the block system and other devices for preventing accidents will be found remunerative when prosperity again advances "by leaps and bounds," and once more overcrowds the great lines with traffic. Again, the bank meetings which are now being held prove to us that the ordinary trade of the country, though quiet, is sound, and continues to yield reasonable profits. If it were not so, the banks generally could not have

earned the large dividends which, in spite of the shock to banking credit, they have declared. A few here and there might have done so, but only a few. Banks live by accommodating trade, and their prosperity is derived from sharing in the profits it realises. Were much of it carried on at a loss, their accounts would tell the tale. The returns of the imports and exports lead up to the same conclusion. Both show a considerable decrease in value, but in quantity there is no material falling off. Even the exports, in which the decline has been long continued, when compared with those of the inflation period, only exhibit stationariness. That is, no doubt, retrogression, since the population has grown in the interval, but it is retrogression which need not alarm, and will easily be made up.

The Character of the Year's Trade.

“Upon the whole, after this rapid review of the transactions of the year in the more important departments, we are led to conclude that the distress was confined to a few great industries, while in the remainder there was stationariness rather than depression, and that the peculiar feature of the year was a sweeping away of bad businesses, a winding up of fictitious credit, and an adjustment of the cost of production to present prices. The bank failures, and the consequences attendant upon them, have relieved business of an incubus which had been weighing upon it for years, and made possible that revival of confidence without which there can be no restoration of prosperity. The reduction of wages which went on throughout the twelvemonth prepared the way for a new outburst of activity. The process inflicted much suffering upon the working classes, regrettable from every point of view, and demonstrating how imperfect is our organisation of industry; but it was inevitable. Wages had been, or are being, lowered in every competing country, and, in fact, production could not be continued without a reduction of its cost. In the great strike in North-East Lancashire the leaders of the operatives themselves did not dispute that the mills were being carried on at a loss; they only contended that the proper remedy was a restriction of production. In the iron trade, again, arbitrators trusted by the men have awarded reduction. But we need not argue the point; the necessity is admitted by all competent authorities. What alone is uncertain is, whether the reduction has been carried far enough, and whether manufacturers generally have enforced in other branches of their expenditure all the economies which are practicable, and are also consistent with efficiency, and whether they have adopted all the improvements requisite to maintain their superiority over competitors. Without pretending to decide the questions, we may observe that the result of the two strikes in Oldham has been a reduction of 15 per cent. in wages, while in North-East Lancashire the reduction was 10 per cent., and that the wages of Scotch miners has been cut down from 8s. 6d. in 1873 to 2s. 9d. last October. We may hope that, though the process of lowering is still going on, it is nearly ended, that we have now almost reached the point where production at a profit is possible, and that we may consequently look forward to a gradual rise of prices, leading to a rise of wages. We have referred already

to the earnings of banks and railways and to the shipbuilding trade as affording evidence that the general trade of the country is fairly prosperous. Further testimony to the same effect is afforded by the comparatively slight increase in pauperism, notwithstanding the reported distress, and by the investments of all sorts that are going on. Shipowners, as we have already said, are preparing for an increase of business, and so are railways. Building in the large towns is being pushed on rapidly, and land is being reclaimed, in spite of the troubles of farmers. Savings, it thus appears, are still being effected and invested. In the early part of the year the proposition was eagerly maintained by some that we were wasting the national capital, and the great excess of the imports over the exports was cited as proof. The contention has gradually died away on the exposure of the fallacy on which it was based. The argument, in fact, took no account of the over estimation of the imports and the under estimation of the exports in the Board of Trade returns, and it quite left out of sight the income yearly transmitted to this country from abroad. There is, in fact, no evidence of loss of capital in the past year, unless it be in the bonds exported to America to pay for goods. But, doubtless, there was serious loss of capital in the inflation period, when loans were recklessly made to bankrupt States and bogus companies. The revenue returns confirm what we have been saying. They exhibit a falling off in customs, excise, and stamps, indicative of stationary business and diminished consuming power. Yet the decline is not such as argues general bad trade, and even the consumption of some articles, as tea, is maintained remarkably. Moreover, the total receipts continued through the year to keep up.

“The New Fall in Silver.”

“The above, in our judgment, have been the main characteristics of the business year, but in addition there have been one or two events of economic interest which deserve notice. One of these is a renewed fall in silver. Between 1873 and 1876, it will be recollected, owing to the demonetisation of silver by Germany, and the stoppage of silver coinage by the Latin Union, there was a severe fall in the price of silver, culminating in the summer of 1876, when at one moment the price was as low as 47*d.* per oz. But a recovery then set in, was checked, and resumed, until at the beginning of last year the price stood at 54*d.* per oz. During 1878, however, there was a renewed depression. At the beginning of the year the Bland Bill, remonetising silver, was before Congress, and promised to raise the value greatly. The Bill was passed over the President’s veto, but the coinage was limited to a maximum of 800,000*l.* per month, and a minimum of half that amount. The price rose to 55½*d.*, but very shortly afterwards began to fall again, and the fall went on till the price touched 49*d.* It is difficult to account for this downward movement on reasonable grounds. The United States Government invited the Governments of Europe to a conference at Paris to arrange for the general adoption of bi-metallism, and although the invitations were generally accepted, the American proposals were almost unanimously rejected. That,

however, was foreseen by every well-informed person, and ought to have inspired no uneasiness. In reality, the proceedings of the conference were favourable to the silver market, especially the attitude of the British delegates. The discussions showed that the Indian Government was not inclined to monetary innovations; that France, Austria, and Holland were resolved to maintain an expectant attitude; and that Italy hopes to resume in silence. Yet the conference had an unfavourable effect. Then it was reported that the new silver dollars were rejected by the American people—a report which was clearly too early to deserve attention. The truth appears to be that the fall was largely the result of panic. Germany has not yet called in all the old silver coins, and so much foolish mystery is maintained in Berlin respecting the stock of metal remaining to be sold that nobody knows with certainty how much there may be, or when the German Government will flood the market. In addition to this, the growth of the home expenses on account of India is constantly swelling the India Council drawings, while the disorganisation of the trade with that country is diminishing the commercial debt due to it. There has thus during the past year been but a small export of silver. Yet, on the other hand, there has been abundant evidence furnished that the depreciation is extreme. The coinage of silver in the United States is slow, and the proportion of the metal in the stock of bullion accumulated by the Treasury is small, yet the effect of the Bland Act in the long run will tell. The report of the British delegates at the Paris Congress, again, informs us that though the Latin Union has stopped the coinage of silver, neither France nor Italy desires the single gold standard. The latter country thinks it can resume specie payments more easily in silver; and the French Minister of Finance still holds to the belief that it is a fluctuation, not a depreciation, that we witness. Holland, again, which has a great Eastern empire, is waiting upon England; and Austria-Hungary, like Italy, is attracted by the cheapness of silver. Thus there is as yet, at least, no permanent contraction of the silver area, except in Germany and the Scandinavian countries. As regards the East, any increase of its trade would swell the demand for the metal, as the great exports of cotton did during the American Civil War. Even now the tendency of the depreciation is to stimulate the exports and check the imports, thus creating a balance of trade in favour of the East, and directing a flow of silver thither. But the most important circumstance of the year in reference to this matter was the decline of the production in the United States. The American evidence collected by the Silver Committee went to show not only that the new mines were enormously productive, but that the cost of working them was trifling. It was said, for example, that one company divided as net profits twelve million dollars out of a total of seventeen millions raised. The inference was that the working of the mines would not be affected even by an extreme depreciation, and that consequently the world would be flooded by the metal. Experience has dispelled the notion. The yield of the mines has never reached the minimum estimated by the Silver Committee, and last year the

falling off was very great. According to Wells, Fargo and Co., whose estimates are of high authority, the production was not quite $7\frac{3}{4}$ millions sterling. It is noteworthy, too, that the decrease was chiefly in the famous Comstock Lode. These figures furnish a suggestive commentary on the course of the market during the past year, serving to show how much need there is for accurate information and logical reasoning.

“Resumption in the United States.”

“Another very important economical event of the year was the resumption of specie payments in the United States. For more than seventeen years the country had been under the *régime* of an inconvertible paper currency, and had suffered all the disadvantages attendant upon fluctuations in the standard of value. These fluctuations had been extreme. At one time the depreciation of the greenback was over 60 per cent., but on the subjugation of the South the appreciation was rapid, and Mr. McCulloch’s judicious contractions carried it still further. His policy was disallowed by Congress, and for a series of years the greenback remained at almost the value to which he had raised it, say 3*s.* 9*d.* It would be out of place here to inquire whether suspension was, in the first instance, necessary. It was a war measure, and if required as such, needs no further justification. But there will be no difference of opinion on the point that it was continued long after the time when resumption was practicable. Mr. McCulloch’s contraction was intended to pave the way for specie payments, and was stopped. The return to solvency was not again seriously attempted till the panic of 1873 had opened the eyes of the country to the mistakes committed in the previous period of inflation. Even then the Resumption Act was carried with difficulty, and its coming into force was postponed for four years. No action was taken under it till Mr. Hayes’s administration was formed, when Mr. Sherman, who was the principal author of the Act, as Secretary of the Treasury, set about preparing to carry it into operation. He had to encounter formidable opposition. A party in favour of inflation agitated for the repeal of the Act, but though it obtained unexpected support in the West and South, it was defeated on its appeal to the constituencies. Still the inflationists were strong in Congress, and made several attempts to give efficacy to their views. They were joined by those who were interested in silver, and in the early part of last year the Bland Act, of which mention has already been made, was carried. All the genuine inflationist measures, however, were defeated, and Mr. Sherman was able to carry out his preparations. They were based on the theory that it would not be found necessary to withdraw the greenbacks from circulation; that the American public had become accustomed to them, desired to retain them in use, and would not present them at the Treasury for payment in any large amount; and that, consequently, all the Government was obliged to do was, like an issuing bank, to accumulate and maintain such a reserve as would ensure the convertibility of its notes. Mr. Sherman came to the conclusion that 40 per cent. in bullion would be an ample reserve. In the Resump-

tion Act provision had been made for a certain amount of contraction. It was enacted that every increase above the then existing issues of the national banks should be accompanied by the withdrawal of a fixed proportion of Treasury notes, or greenbacks, as they are popularly called. This provision was acted upon to a small extent, but it was repealed in the early part of last year, and all further contraction ceased. The total amount of paper currency then outstanding was 346,743,051 dollars, or 69,348,610*l.* sterling. The coin in the Treasury at the close of the year was 40,000,000*l.*, which is nearly 60 per cent. But a portion of this sum would be required for the payment of interest. Mr. Sherman's preparations satisfied the public, and in New York the premium on gold disappeared a fortnight before the end of December, thus practically effecting resumption. Along the Atlantic seaboard the actual return to specie payments encountered no difficulties. But in the north-west there appears to have been a hitch, presumably owing to the omission by the Secretary of the Treasury to provide in Chicago for the exchange of the notes. There ought, however, to be no difficulty in supplying the omission. In the Treasury statement the gold and silver held are not distinguished, both being lumped together as coin, but it is known that the proportion of silver is very small. The total accumulation of both metals during the year amounted to 19 millions sterling. It will be seen how this lock-up of gold tended to make that metal scarce and dear all over the world. Whether even yet the accumulation has ceased remains to be seen. In the meantime, however, the accomplishment of resumption places the trade of the United States on a solid foundation, and is another influence in favour of revival. The facility with which the measure was accomplished is mainly due to two exceptionally good harvests, which enabled the American people to export in unprecedented quantities to Europe the produce of their soil, and created a large balance in their favour.

“The Protectionist Revival.”

“Of a very different character, but even more important in its bearings upon the material development of the world, was the other great foreign event which characterised the past year; we refer to the protectionist revival. Ever since the panic of 1873, and the depression which followed it, there has been an agitation upon the continent for a return to protection. It has not been confined to any one country, but has extended to all, and has been stimulated and nourished by the collapse of so many great industries. As it happened, the commercial treaties generally expired just while this agitation was coming to a head, and the several Governments committed mistakes in reference to them which served the protectionists. Our own Government cannot be altogether acquitted. When the period for revising the treaty with France arrived, it opened negotiations, which unfortunately were interrupted by the political intrigues of which France was then the victim. It is believed, however, that favourable terms might have been obtained from the new Ministry. It is little use now, however, blaming the past; suffice it then to note that the

treaties were not renewed, and the protectionists, drawing encouragement from the fact, grew bolder. The Continental Governments one after another fell under their influence. Spain led the way, imposing upon English and French imports prohibitive duties from which the goods of other European countries were exempted. Italy followed. During the latter half of last year she and France have been harassing one another with hostile tariffs. Austria-Hungary took the same course. A general tariff was adopted last year, which raised the duties of every kind very greatly, sometimes doubling and even quadrupling them, and in every instance requiring them to be paid in gold, in itself an addition of 15 or 20 per cent. Furthermore, she spun out the negotiations with Germany for the renewal of a treaty, finally agreeing only to the prolongation of the existing one for twelve months; and lastly, she allowed the treaty with France to expire, and the two nations applied prohibitive duties to one another's wares. In Germany Prince Bismarck threw himself into the arms of the protectionists. He had been labouring for a long time to obtain a larger imperial revenue, and as he was foiled in all his plans, he turned to the party which was clamouring for an augmentation of the customs imports to help him out of his difficulty. He began by appointing a commission of inquiry into the existing tariff, putting at its head an avowed protectionist, to whom he wrote a letter indicating the course he was about to pursue. He followed this up by a letter to the Federal Council, in which he announced that the negotiations with Austria-Hungary were broken off, and recommended a duty upon all goods. This letter naturally made a great sensation. It was an announcement that Prince Bismarck would not negotiate again till he was possessed of the means of coercion. It determined the ending of the Franco-Austrian negotiations. In the last place, France gave notice to terminate all the commercial treaties still binding upon her. The Dufaure Cabinet in its programme submitted to the Chamber last week declares itself resolved to maintain the policy recently pursued, and there are reports of the resignation of the Minister of Commerce, who is believed to lean towards protection. From all this we may hope that reaction will not triumph in industry any more than in politics. But it is certain, at all events, that concessions from France must be purchased by counter concessions, and in our case we have only a reduction of the wine duties to offer. Revenue considerations oppose an obstacle here, but they will have to give way.

"We close this sketch in broad outline of the principal commercial and financial events of the past year with the following extracts, which will supply the details necessarily omitted from the foregoing general survey:—

*"Money and Trade in 1878.**

"What we have done month by month, with the aid of our tabular appendix, we can do for the whole year now concluded. The supplemental sheet of figures (published in this number)† will

* From the *Statist* of 4th January, 1879.

† And reprinted in the tabular appendix of this supplement.

tell the story of 1878 at once to those who are familiar with such figures; they will remember, on glancing at the weekly comparison of bank returns, clearing house, revenue, foreign exchange, prices, traffic returns, what have been the features of the year's financial and commercial history. There were two landmarks standing out prominently in the path of trade in 1878; the one was the Berlin Treaty of Peace, the other the failure of the City of Glasgow Bank; the first was concluded in the middle of July, but already, at the beginning of May, Count Schouvaloff's mission of peace to St. Petersburg was the signal for a general burst of confidence and hope; the second event referred to occurred on the 1st of October, and instead of spreading hope, it filled the whole country with consternation, and clogged the machinery of credit by which trade is so largely carried on. Up to the time of the Glasgow Bank crash there had been really little variation in the course of trade, although confidence and a speculative feeling had been excited in such markets as those for public stocks, cotton, iron, &c.; the "peace rise" of prices on the Stock Exchange was an illustration of this improved feeling, but a relapse soon occurred; the spurt was artificial, temporary, spurious. The hope of an ultimate improvement in the more solid evidences of the state of trade was, however, entertained; it was throughout the year remembered that trade is subject to cycles, that the depression of prices and languor of business could not last indefinitely, that the lane had been long, and a turning was every month approached more nearly. We did not hesitate to endorse an encouraging view of the ultimate future, partly because of the position of the trade cycle, and also because of the average crops of the country were good in 1878, but our tabular appendix gave plain warning that such views could not be applied too closely. Hope was justified, but trade did not expand. Up to October prices had continued to fall in the chief wholesale markets, business had continued to contract, and the feeling of cheerfulness which prevailed after the Berlin settlement had not been followed up. In October came the turning to the long lane, but it led to an unexpected quagmire. Only a month before we said: "the longer the trade depression lasts, the more concern and anxiety does that depression spread. Credit must be strained, economy practised, hands dismissed, operations curtailed, profit foregone; and the longer the dismal unprofitableness of over production continues, the tighter grows the strain and pinch, the larger the loans from local banks, the closer the danger of accidents which may bring about a stoppage." A reader, now turning over the back numbers of this journal, and coming upon these words,* might think we had some intimation of the coming catastrophe, but we had no suspicion of it, its tremendous extent, or its locality; there was an uneasy feeling in Lombard Street, but the best informed of those outside the City of Glasgow Bank ring knew nothing of the awful disaster impending. Since then the financial element has been paramount; credit has been shocked, banks have been run upon, bills and securities have lost their negotiable character, the

* *Statist*, 7th September, p. 26.

and exhibitors at the Exposition, this market was in a position of losing gold instead of receiving it on balance from abroad. At the beginning of August, then, the cash reserve at the Bank of England had fallen to 8,600,000*l.*, and the bank rate was immediately raised to 5 per cent. The effect of the measure was distinct and immediate; at the end of September the reserve had advanced to 12,300,000*l.*, the market rate of discount had sunk to 4 per cent., and the foreign exchanges (as will be seen from the table in our Supplemental Sheet) had reached favourable points. But on the great bank failure at the opening of October the prospect was changed. The bank reserve fell to three millions in about as many weeks, the bank rate went up to 6 per cent. officially, and beyond that non-officially. Nevertheless the shock soon began to pass away, and at the end of November the bank reserve had recovered to 12,700,000*l.* But in the opening weeks of December the Caledonian Bank suspended, and more serious still, the West of England and South Wales Bank also. There was then a scramble for cash by local banks in nearly all parts of the country. Gold coin and notes were alike withdrawn hastily from the Bank of England, and in very large amounts; the large sums of gold which had been received from abroad—principally from the Bank of France, as will be judged from the accounts of that institution—were insufficient to compensate for these withdrawals, and on 18th December the bank reserve was again as low as 9,200,000*l.* The amount of home withdrawals since the beginning of October may be shown by comparing the stock of coin and bullion now and at the end of September, allowing for the influx of gold from abroad during the included period, and also stating the increase of note circulation, thus:—

Fourteen Weeks to 24th December, 1878.	
£	
Internal drain of gold, net	3,750,000
Increase of note-circulation.....	6,500,000
Together	<u>10,250,000</u>

This total is huge, being 9 millions more than has been taken from the bank in the ordinary course of things during corresponding periods of quiet years. Latterly, then, the dearness of money has been simply the combined effect of discredit, the accumulation of cash by bankers, and their unwillingness to lend; and so the year in the money market ends.

“The trade statistics of the country are accurately epitomised in the London Bankers’ Clearing House returns. From these figures, as set out from week to week, we learn the activity of business from time to time during the year. In the earlier months of 1878 the payments effected through the clearing house showed on the whole no definite improvement upon those of the corresponding period in 1877, but in June there was a distinct and steady increase. We cannot be far wrong in connecting this augmentation of trade transactions with the improvement of tone and prices in the stock markets which ensued upon Count Schouvaloff’s

mission of peace; and although not altogether in stock exchange business, the increased transactions were doubtless of a speculative kind similar to those which a lightening of political or general uneasiness produces in the stock markets. But as the autumn approached there was no longer any increase of transactions, speculative or otherwise. The comparison was as follows:—

London Bankers' Clearing House Returns.

£		
July	(5 weeks).....	32,185,000 increase on previous year.
August	(4 „).....	18,704,000 „ „
September	(4 „).....	548,000 „ „
October	(5 „).....	33,360,000 decrease „
November	(4 „).....	50,618,000 „ „
December	(4 „).....	27,066,000 „ „

Thus, although the worst seems to have been passed, there is still a great reduction in transactions. To complete the picture, and to show in what parts of the country trade has specially fallen off, we may refer to the table of railway traffic returns, which have in recent weeks diminished where a show of increase and progress was made earlier in the year, and where the comparison was adverse before it has become worse as the year drew nearer its end. The heavy decreases on the North Eastern, which runs through an iron making district, and on the Lancashire and Yorkshire, which serves a textile manufacturing population, are expressive features.

“ A review of prices in the wholesale markets of the country shows a very general decline for the year. Taking cotton, we find that the quotations for middling uplands began at $6\frac{1}{4}d.$ per lb., fell away in the spring, but advanced again until it reached about $6\frac{3}{4}d.$ in August, and subsequently relapsed. The October banking crash bore hardly upon cotton amongst other markets, and at the close of the year the price is as low as $5\frac{3}{8}d.$ per lb. The movement in iron has not been altogether similar, but we see that the steady fall from $52s. 6d.$ per ton for Scotch pig at the opening of the year to $47s. 3d.$ at the end of September, was then suddenly hastened, and the closing price is little above $43s.$ In nearly all cases the decline is distinct, as compared with the range of prices last summer, and still more so on comparison with the beginning of the past year. Wheat has not escaped the effect of reduced banking facilities, purchases having been curtailed, and prices accordingly allowed to fall. In the stock markets, it will be seen, there was also a tendency to steadiness. There was even a rise in certain foreign stocks, notably Egyptian, Russian, &c., because of the political settlement in the summer of 1878, but the prices then current have in none but the most exceptional cases been maintained; and in all the stocks affected by an increased value of money there is a heavy decline. Under the financial pressure it has been difficult to hold alike securities and goods; the disposition has been rather to sell, and thus are explained the reduced market values of the close of the year as compared with its opening. But for the banking troubles there might have been a general rise.

“Having shortly run over the facts brought out by our tabular statement for 1878, we may suggest their bearing upon the present position of business. The extraordinary precautions of bankers, as apparent from their absorption of coin and notes, will no doubt soon relax—in time they must do so—and moreover, the high value of money which has ruled here for some time has set causes in operation which tend to bring gold from abroad, even after the necessity for that gold has passed away. Probably also, after the first effect of resumption in America is over, the surplus gold accumulations in that country will not stop there, but seek this market. The contraction of trade, the fall of wages and prices within the country, meanwhile contribute to reduce the internal requirements of coin and notes, and to swell the cash balances of bankers. The cardinal point in an estimate of the course of the money market is how soon bankers will release their excessive balances. Accidents apart—and there is no use in prophesying about accidents—there is much reason to believe that these balances will come out steadily, if slowly. We have now reached a time when prices are so low that a rise is the only general movement which can be expected, and a rising tendency of prices is of all things that best calculated to promote activity of speculation and revival of trade. Again, the letting out of bankers’ balances will of all things be that most likely to give the requisite ability to merchants and dealers to buy. With rising prices and active business, profits will increase once more, production will again be stimulated, and employment will again increase. The process of recovery will be what we have sketched, but it will be slow in its progress and interrupted by an occasional appearance of relapse, as well as by extensive organised strikes amongst workmen, by political tremors, by dropping failures, resulting from the recent squeeze, and the other miscellaneous drawbacks upon an advancing state of trade.

The Crops.

“The *Mark Lane Express* publishes a summary of crop returns for 1878, collected from several districts in each of the English counties, and from five of the counties of Wales. Our contemporary remarks as follows:—‘While reports of an abundant harvest were being published throughout the length and breadth of the land, we stood almost alone in protesting against such sanguine estimates, which could only mislead, and did mislead, the general public. The season had been so antagonistic to the growth of healthy corn crops that we could not believe a generally large yield possible, and a careful examination of the wheat crop showed that the ears were not well filled with grain; while the barley crop was obviously a rather light one. We stated our conclusions, therefore, to the effect that the wheat crop, at the best, was only a bare average, and that barley was below average. We were accused of ‘croaking,’ and the multitude of witnesses, if not the weight of evidence, was certainly against us. There was such a full crop of wheat straw that those who had not taken the proper means to ascertain what was in the straw could not be made to believe that

the yield would be anything less than a very great one. By-and-bye, however, as the thrashing machine got to work, reports began to come in of wheat yielding less than had been expected, and these reports became quite general as time went on. Now that a considerable proportion of the crop has been thrashed, it will be seen that out of 394 returns, collected from farmers and corn merchants, 122 are under average, 193 average, and 79 over average. This, as we fully expected, is by no means so bad a result as we had to chronicle at this time last year, with respect to the wheat crop of 1877, when out of 409 returns, 369 were under average, 34 average, and only 6 over average. But the wheat crop of 1877 was, as stated last year, the worst that we had reported on during a period of fifteen years. The crop of 1878, on the contrary, is better than most of the generally bad crops of the last ten years, being only beaten by those of 1870 and 1874, as a reference to a table given below will show. In fact the crop of 1878 was so nearly an average one that if prices had been satisfactory it would have been a paying crop. Still, instead of having been underrated in our early estimate, it was done a little more than justice to by being described as a 'bare average.'

"The barley crop, though good in exceptional districts, was generally admitted to be inferior to the wheat crop. Out of 379 returns, 170 are under average, 168 average, and only 41 over average. This, again, is a little better than the result published last year for the crop of 1877, with respect to which, out of 395 returns, we reported 260 to be under average, 116 average, and only 19 over average. That crop, like the wheat crop, was the worst, as shown by our returns, during a period of fifteen years. Our ten years' table given below shows that the barley crop of 1878 ranks about fifth in the scale of deficiency, being, however, very little better than the crop of any year but 1869, which appears to have been the worst barley year of the ten.

"Oats stand a wet season better than the other cereals, and it is not, therefore, surprising to find them represented in our abstract as the best of the three white-straw crops. In the ten years' table the oat crop of 1878 stands as the third best.

"Of the pulse crops, beans, which love plenty of rain, appear much more to advantage in our abstract than peas, which do badly in a very wet season. Thus the bean crop of 1878 is about the fourth best of those of the past ten years, while the pea crop is one of the worst.

Abstract of Grain Crop Returns for 1878.

	Wheat.	Barley.	Oats.	Beans.	Peas.
Over average	79	41	74	35	9
Average.....	193	168	213	131	122
Under average	122	170	91	82	114
Advices	394	379	378	248	245

"Both turnips and mangolds are a little over average, as repre-

sented in the summary below, turnips being the better crop of the two. The hay crop was well known to be a remarkably heavy one, and our summary of the returns for this crop presents the very pleasant feature of a blank in the 'under average' line. We are glad to see the potato crop reported on much more favourably than it was last year.'

Abstract of Root, Hay, and Potato Crop Returns for 1878.

1878.	Turnips.	Mangolds.	Hay.
Over average	94	79	279
Average	216	190	119
Under average	72	65	—
Advices	382	343	398

"The following calculation has been made by a French journal, the *Bulletin des Halles*, as to the wheat crops of the principal countries in and out of Europe:—

[000's omitted.]

Country.	Average Crop.	Estimated Crops in 1878.	Estimated Imports.	Estimated Exports.
<i>Europe—</i>	Bushels.	Bushels.	Bushels.	Bushels.
France	281,325,	226,875,	55,000,	—
Russia	220,000,	214,500,	—	44,000,
Germany.....	121,000,	123,750,	—	—
Spain	115,500,	110,000,	—	—
Italy	107,250,	104,500,	8,250,	—
Austria-Hungary	101,750,	110,000,	—	17,875,
Great Britain	101,750,	101,750,	96,250,	—
Turkey in Europe	41,250,	38,500,	—	—
Roumania	33,000,	37,950,	—	5,500,
Belgium	23,375,	23,375,	2,750,	—
Portugal	8,250,	8,250,	1,375,	—
Greece	4,950,	4,813,	—	—
Servia	4,125,	3,850,	—	—
Denmark.....	2,750,	2,750,	—	1,375,
Sweden	2,338,	2,337,	550,	—
Switzerland	2,338,	1,870,	8,250,	—
Norway	270,	270,	1,110,	—
Miscellaneous	540,	540,	—	—
	1,171,760,	1,115,880,	173,535,	68,750,
<i>Out of Europe—</i>				
The United States	302,500,	330,000,	—	110,000,
Algeria	24,700,	21,625,	1,375,	—
Canada	16,500,	16,500,	—	2,450,
Australia.....	16,500,	16,500,	—	2,750,
Egypt	16,500,	11,000,	—	—
Miscellaneous	8,250,	8,250,	—	—
	384,950,	403,875,	1,375,	115,500,
General totals.....	1,556,710,	1,519,755,	174,910,	184,250,

"According to these returns, England and France, the only countries which import wheat upon a large scale, have grown this year about 150,000,000 bushels less than they will require for their own consumption, and it will be seen that Russia and the United States are in a position to export about 154,000,000 bushels, or about the quantity which the two former countries want."

*Foreign Trade in 1878.**

"As a pendant to the general review of the trade of last year which we published last week, notice may be taken of the state of foreign commerce with this country during 1878. In the tables which we give, as in previous months, will be found the figures for December and for the year ending with that month, compared with the corresponding month and year of 1877. The total imports for the month show a great decrease—a decrease similar to that experienced in each month succeeding the outbreak of the banking crisis at the beginning of October; for the year the rate of decrease is not so marked as during the three latter months of which December was an example, but those three months have increased the falling-off instead of marking a revival in the import trade. There is a moderate decrease in the exports both for the month and the year past. The aggravated depression which we last week deduced from the general statistics of trade is reflected in the imports and exports also.

"During December the imports of gold were 3,090,000*l.*, the exports 1,438,000*l.*, leaving a net import of 1,662,000*l.* In December, 1877, the net import was only 142,000*l.*, and in the same month of 1876 there was a net *export* of gold equal to 1,654,000*l.* The peculiar state of the money market is the explanation of this unusual retention of gold here of late. We have been putting a drain upon foreign markets.

"Reviewing the history of our foreign trade during the year now completed, that feature which stands out most boldly is the contraction which began in the spring of 1878, and continued until the close of the twelvemonth. Month by month, from May forwards, the comparison with corresponding figures in 1877 showed a successive decline both in imports and exports, as will be seen from the following list:—

* From the *Statist* of 11th January, 1879.

Value of Imports in each Month of 1878 compared with 1877.

[000's omitted.]

	1878.	1877.	Increase.	Decrease.
	£	£	£	£
January	30,610,	32,899,	—	2,289,
February	32,175,	30,942,	1,233,	—
March	33,168,	35,229,	—	2,061,
April	34,004,	32,165,	1,839,	—
May	31,029,	34,648,	—	3,619,
June	28,661,	29,810,	—	1,149,
July	35,882,	36,151,	—	269,
August	29,107,	31,944,	—	2,837,
September	27,230,	28,235,	—	1,005,
October	29,582,	36,537,	—	6,955,
November	25,685,	31,850,	—	6,165,
December	26,577,	32,160,	—	5,583,
Total for year....	363,710,*	392,570,*	—	28,860,

* The totals differ a little from those given officially for the whole year, but what we give is the sum of the figures as published from month to month.

Value of Exports in each Month of 1878 and 1877.

[000's omitted.]

	1878.	1877.	Increase.	Decrease.
	£	£	£	£
January	15,424,	15,946,	—	522,
February	14,896,	14,394,	502,	—
March	16,756,	16,921,	—	165,
April	16,327,	15,207,	1,120,	—
May	16,165,	17,461,	—	1,296,
June	15,092,	15,306,	—	214,
July	16,401,	17,587,	—	1,186,
August	17,304,	17,747,	—	443,
September	16,561,	17,117,	—	556,
October	17,255,	18,373,	—	1,118,
November	15,962,	16,753,	—	791,
December	14,661,	15,978,	—	1,317,
Total for year....	192,804,	198,790,*	—	5,986,

* See note above.

“The persistent decrease in the aggregate value of the imports was partly owing to a general decline of prices, most marked in articles of food, of which in late years we have derived such large amounts from abroad. For the first half of the year there was a considerable increase in the money value of imported food, but after July there was a distinct change, and in the autumn months the returns showed a heavy falling off, not only in values, but in quantities as compared with last year, as will be ascertained from the subjoined comparison :—

Imports of Food.

[000's omitted.]

	1878.	1877.	Increase.	Decrease.
	£	£	£	£
First six months	50,981,	44,778,	6,203,	—
July	9,548,	9,068,	480,	—
August	8,097,	8,289,	—	192,
September	7,800,	7,964,	—	164,
October	8,591,	10,294,	—	1,703,
November	6,903,	9,121,	—	2,218,
December	6,602,	8,892,	—	2,290,
	—	—	—	—

“From October forwards, the whole of our import trade was checked by the banking crisis, and the check so placed upon the buying power of all mercantile classes, whether in the corn trade or other trades; but no doubt the better crops at home this season reduced the country's requirements of foreign food, and at any rate there was a fall in the money value of imported grain.

“The check upon our import trade brought on by the Glasgow Bank crash could not be expected to act with like effect upon the exports of the country, and it did not directly do so. From the list given above it will be seen that there was a steady decline almost throughout the year, not much accentuated at the time of the banking crisis, but beginning as early as in May, and continuing without interruption or abatement. Inasmuch, however, as the falling of the aggregate exports was mainly accounted for by the decrease in the shipments of cotton goods to the East, and the decrease of such shipments marked the collapse of an overwrought fabric of fictitious credit, the banking crisis was not altogether unconnected with the diminution of the exports also. The falling off of exports of cotton goods to eastern markets during the year was in extent as follows:—

Exports of Cotton Piece Goods to the East.

[000's omitted.]

	1878.		1877.		Decrease in 1878.	
	Quantities.	Values.	Quantities.	Values.	Quantities.	Values.
	Yards.	£	Yards.	£	Yards.	£
India, Ceylon, and } Straits Settlements }	1,295,400,	14,082,	1,446,500,	15,973,	151,100,	1,891,
China and Japan	382,420,	4,634,	394,490,	4,832,	12,070,	198,
Java	58,800,	876,	81,270,	1,300,	22,470,	424,
Total	1,736,620,	19,592,	1,922,260,	22,105,	185,640,	2,513,

“The entries of vessels with cargoes have in recent months fallen off very considerably, in consequence of the stringent state

of financial affairs in this country; and reckoning the whole year, there is a decrease upon the entries for 1877 of 813,000 tons, or $3\frac{3}{4}$ per cent.; and the falling off is, moreover, in British bottoms. Meanwhile it is interesting to note that the entries from the United States' ports have much augmented; in 1877 the total was 4,071,000 tons, and last year it was 4,718,000 tons. Further, the tonnage of vessels cleared with cargoes from our ports to the United States has slightly augmented also; in 1877 the total was 2,030,000 tons, in 1878 it had risen to 2,369,000. This is a feature of our foreign trade which will be watched with the greatest interest.

"If there is an English industry which represents the state of foreign and home trade with most truth, it is the wool trade. During the past year we imported less foreign wool and re-exported more than in 1877. The net imports were accordingly 196,195,000 lbs. against 218,547,000 lbs. in 1877; our takings were therefore over 22 million lbs. less last year. Our exports of woollen and worsted goods were just 4 million lbs. in excess of 1877; so that there remained at least 26 million lbs. less wool for home consumption in 1878 than in the previous year. This result agrees with what is heard on all sides as to the reduced incomes and spending power of this country, and also with the reports of stagnation of trade in the woollen manufacturing districts. We venture to consider this instance as being a good illustration of the general state of foreign trade during 1878.

Summary of Board of Trade Returns for December.

Showing the increase or decrease in amounts and quantities compared with the previous year.

(A.) *Imports, less Bullion, and Exports of British and Irish Produce.*

[000's omitted.]

	December.				Twelve Months ended December.			
	1878	1877.	Difference.	Per Cent.	1878.	1877.	Difference.	Per Cent.
	£	£	£		£	£	£	
Imports	26,577,	32,160,	— 5,583,	17·3	366,060,	394,274,	— 28,214,	7·2
Exports	14,661,	15,978,	— 1,317,	8·2	192,804,	198,893,	— 6,089,	3·1

(B.) *Quantities of Principal Imports and Exports.*

[000's omitted.]

	December.			Twelve Months ended December.		
	1878.	1877.	Difference.	1878.	1877.	Difference.
IMPORTS.						
Coffee cwt.	76,	106,	— 30,	1,273,	1,610,	— 337,
Copper, un- wrought } tons	2'0	2'5	— '5	39'4	40'2	— '8
Wheat cwt.	3,501,	5,178,	— 1,677,	49,812,	54,163,	— 4,351,
Flour..... "	742,	875,	— 133,	7,824,	7,370,	+ 454,
Cotton "	1,230,	1,179,	+ 51,	11,978,	12,113,	— 135,
Flax..... "	47,	99,	— 52,	1,554,	2,216,	— 662,
Hemp "	85,	61,	+ 24,	1,224,	1,251,	— 27,
Hides, tanned lbs.	2,886,	3,817,	— 931,	50,425,	46,855,	+ 3,570,
Flax and lin- seed } qrs.	207,	311	— 104,	1,991,	1,707,	+ 284,
Silk, raw lbs.	413,	723,	— 310,	4,175,	4,437,	— 262,
Silk, broad stuff } £	452,	450,	+ 2,	7,730,	7,623,	+ 107,
Sugar, unre- fined } cwt.	1,237,	1,389,	— 152,	14,935,	16,633,	— 1,698,
Tea lbs.	17,210,	13,765,	+ 3,445,	205,461,	187,515,	+ 17,946,
Wine..... gals.	1,342,	1,693,	— 351,	16,462,	19,631,	— 3,169,
Wood, sawn, &c. lds.	120,	343,	— 223,	3,619,	4,573,	— 954,
Wool..... lbs.	12,783,	11,184,	+ 1,599,	395,461,	405,949,	— 10,488,
EXPORTS.						
Coal, &c. tons.	1,102,	1,070,	+ 32,	15,484,	15,420,	+ 64,
Copper cwt.	61,	65,	— 4,	893,	798,	+ 95,
Cotton yarn ... lbs.	19,261,	19,947,	— 686,	250,531,	227,651,	+ 22,880,
" piece goods..... } yds.	280,581,	312,838,	— 32,257,	3,618,126,	3,837,821,	— 219,695,
Iron and steel tons	149,	174,	— 25,	2,299,	2,346,	— 47,
Linen yarn ... lbs.	1,386,	1,674,	— 288,	18,482,	19,216,	— 734,
" manu- factures.... } yds.	10,126,	12,856,	— 2,730,	157,227,	173,686,	— 16,459,
Oil—seed oil... gals.	1,354,	1,806,	— 452,	16,933,	16,549,	+ 414,
Silk manu- factures.... } £	180	129,	+ 51,	1,921,	1,705,	+ 216,
Sugar, refined cwt.	72,	117,	— 45,	1,043,	1,119,	— 76,
Wool..... lbs.	477,	586,	— 109,	6,441,	9,549,	— 3,108,
Woollen yarn " yds.	2,251,	2,534,	— 283,	31,184,	26,973,	+ 4,211,
" cloths	3,091,	3,693,	— 602,	43,555,	44,125,	— 570,
Worsted Stuffs "	15,579,	16,434,	— 855,	192,558,	194,777,	— 2,219,

(c.) *Tonnage of Shipping Entered and Cleared (with Cargoes).*

[000's omitted.]

	December.				Twelve Months ended December.			
	1878.	1877.	Difference.	Per Cent.	1878.	1877.	Difference.	Per Cent.
<i>Foreign—</i>								
Entered	1,564,	1,900,	— 336,	17'6	21,318,	22,131,	— 813,	3'7
Cleared	1,544,	1,588,	— 44,	2'7	21,582,	21,197,	+ 385,	1'8
<i>Coastwise—</i>								
Entered	2,072,	2,114,	— 42,	2'0	25,125,	24,786,	+ 339,	1'4
Cleared	1,850,	1,862,	— 12,	0'7	22,521,	22,229,	+ 292,	1'3

(D.) Imports and Exports of Gold and Silver.

[000's omitted.]

	December.				Twelve Months ended December.			
	1878.	1877.	Difference.	Per Cent.	1878.	1877.	Difference.	Per Cent.
<i>Gold—</i>	£	£	£		£	£	£	
Imports	3,091,	1,012,	+ 2,079,	205·0	20,872,	15,452,	+ 5,420,	35·0
Exports	1,438,	880,	+ 558,	63·5	14,969,	20,374,	— 5,405,	27·0
<i>Silver—</i>								
Imports	736,	2,589,	— 1,853,	71·0	11,549,	21,711,	— 10,162,	47·0
Exports	694,	1,292,	— 598,	45·5	11,718,	19,437,	— 7,719,	36·5

(E.) Imports of Food (Values).

[000's omitted.]

	December.			Twelve Months ended December.		
	1878.	1877.	Difference.	1878.	1877.	Difference.
	£	£		£	£	
Animals, living	297,	368,	— 71,	7,454,	6,012,	+ 1,442,
Bacon	629,	549,	+ 80,	6,696,	5,733,	+ 963,
Beef	175,	140,	+ 35,	1,753,	1,674,	+ 79,
Butter	697,	683,	+ 14,	9,940,	9,538,	+ 402,
Cheese	325,	405,	— 80,	4,939,	4,763,	+ 176,
Wheat	1,737,	3,152,	— 1,415,	27,397,	33,820,	— 6,423,
Barley	476,	881,	— 405,	5,546,	5,397,	+ 149,
Maize	472,	641,	— 169,	12,589,	9,851,	+ 2,738,
Flour	588,	808,	— 220,	6,790,	6,803,	— 13,
Eggs	168,	173,	— 5,	2,512,	2,472,	+ 40,
Fish	145,	170,	— 25,	1,210,	1,350,	— 140,
Hams	153,	71,	+ 82,	1,916,	1,152,	+ 764,
Lard	128,	129,	— 1,	1,787,	1,473,	+ 314,
Meat	241,	160,	+ 81,	1,740,	1,843,	— 103,
Pork	64,	49,	+ 15,	657,	608,	+ 49,
Potatoes	115,	322,	— 207,	2,397,	2,347,	+ 50,
Rice	192,	191,	+ 1,	3,192,	3,507,	— 315,
Total	6,602,	8,892,	— 2,290,	98,515,	98,343,	— 172,

American Economy in 1878.

“(McCulloch and Co.’s *Financial Circular*, dated New York, 27th December, 1878).—“The year closes with a generally quiet feeling in business circles. Although there has been, especially during the second half, an improvement upon any year since 1872, yet the feeling at the close is not one of unmixed satisfaction. Values have been steadier, but still there has been some decline in prices, accompanied with losses which have diminished the already very moderate profits. The transactions, as measured by quantities, have been larger than in late years; but, considering the lowness of prices, their money valuation perhaps aggregates lower than in the case of some former years. An important drawback has also arisen from the large amount of failures incident to the

repeal of the Bankrupt Act, which has caused a very considerable number of insolvents to avail themselves of the lenient provisions of the expiring law, and consequently unusually heavy amounts have had to be written off to the 'loss' account. Under these circumstances the balancing of the year's accounts does not show the satisfactory results that might have been expected from the improved condition of trade. But notwithstanding these drawbacks, it is very commonly conceded that the general condition of trade is far more satisfactory than it has been at any time since the crash of 1873, and that the agricultural, manufacturing, and commercial interests of the country have at last reached a basis from which a solid and enduring prosperity may be anticipated. But, as intimated in these advices of the 20th instant, serious misgivings are felt in some quarters as to whether this is equally true of our large corporations, especially those engaged in the business of transportation—a most important interest in this country of 'magnificent distances.' Our agricultural States have not only very largely extended their production, but have demonstrated their ability to produce profitably upon a scale of prices very exceptionally low, which assures to those sections the prospect of being able to command the European markets for an immense volume of products which have heretofore been mainly supplied by other countries. It is unquestionable that, with economies on the one hand and with low prices for new materials and low wages and new mechanical inventions on the other, these times of extreme depression have been attended with a very important extension of our manufacturing industries. This expansion is not so apparent in our older and better established manufactures, as in a multiplicity of minor branches of production, in which the success is remarkable, not only for the extent of the out-turn, but also for the comparative excellence of the products. This growth appears to be entirely natural and spontaneous, and certainly cannot be said to be the result of forced and artificial culture, for the times have admitted of no such influences, beyond what have arisen from a very high tariff, which stimulant has been no greater during late years than at any time for the last fifteen years."

Here follows an Appendix containing extracts from various trade circulars in different groups, and numerous tables, as indicated below, viz. :—

Abstracts from Trade Circulars.

A.—PRODUCE—

*Mincing Lane Market—Imported Meat—Rice—Tea—Wine—Oil
and Seed Trade—Hide and Tallow Trade—Tobacco—Wood.*

B.—RAW MATERIALS—

Cotton—Flax—Silk—Wool.

C.—COAL, IRON, AND CHEMICALS—

Coal—Coal Mining—Iron—Chemicals.

D.—MISCELLANEOUS—

Gold and Silver—Shipping—Engineering.

Index to Tables.

BANK RETURNS—

Bank of England—Bank of France—Bank of The Netherlands—Bank of Germany—Bank of Austria—Associated New York Banks—Savings Banks.

CLEARING HOUSE RETURNS—

London Bankers Clearing Returns—Settlings on 4th of the Month.

Stock Exchange Settling Days—Foreign Market Rates of Discount—Exchanges and Bullion—Public Revenues—Stock Exchange Securities—Traffic Returns—Pauperism—Prices of Wholesale Commodities—Supply, Stock, and Prices of Wholesale Commodities—Failures.

II.—*Prices of Exports from 1861 to 1877.*

THE following is a copy of the report by Mr. Giffen to the Board of Trade on the Prices of Exports from 1861 to 1877, referred to in his paper in a preceding part of this *Journal*:—

“Sir,—In conformity with your directions I have made an examination of the statistics of our export trade, with special reference to the question of variations in the total value of the trade from year to year in consequence of changes in prices. The result of this examination will be found in the annexed tables, which I have now the honour to submit, with the following explanatory observations:—

“The first table contains a statement for the years 1861 to 1877 of the average prices of the various articles of export enumerated in the *Statistical Abstract*, as resulting from a division of the aggregate value entered in each case by the total quantity entered. I have commenced with 1861, as being a year of very great depression in trade, and also the date when the effect on prices of the great gold discoveries in California and Australia had become very considerable, and there was little doubt at least that gold had in fact very seriously depreciated. Since 1861 also, there have been two periods of very great prosperity in trade and advancing prices, viz., 1863-66, 1871-73, and we can thus compare the extremes to which prices rose in these two periods, with the extremes to which they fell in the depression of 1867-69, and to which they have now fallen since 1873.

“A mere inspection of this table will show, I believe, that the change of prices must be a very powerful factor in varying the amounts of our trade from year to year; in swelling the total at one time and diminishing it at another. For instance in cotton manufactures, which constitute so large a portion of our export trade, about $32\frac{1}{2}$ per cent. in recent years, we find that the price of yarn which was $12\cdot54d.$ per lb. in 1861, rose to $28\cdot80d.$ in 1864, fell to $20\cdot04d.$ in 1869, and after various changes had fallen to $12\cdot85d.$ in 1877, or very nearly the price from which it rose in 1861.

The price of piece goods (plain) rose in the same way from 3·02*d.* per yard in 1861, to 5·79*d.* in 1864, fell to 3·79*d.* in 1869, and in 1877 had fallen to 2·83*d.* or lower than in 1861. There were similar changes in other articles of cotton manufacture. In other words the price of cotton goods on the average of the whole trade has been at one time about 100 per cent. higher than it was in 1861, or in the last year of our series 1877; and cotton goods forming about a third of our exports, this variation of 100 per cent. in the values of such goods would, other things being equal, amount to a variation of over 30 per cent. in the total trade. Such a variation might be neutralised by changes in other articles in an opposite direction, or by a reduction in the quantities exported; or it might be aggravated by changes in other articles in the same direction, or an increase in the quantities exported, but the example shows what the tendency of a mere change of prices must be.

“To give another illustration. The various articles of iron manufacture constitute about 10 per cent. of our total export trade, but we find on examination that the price of pig iron has ranged between the extremes of 51·77*s.* per ton in 1861, and 124·65*s.* in 1873; bar, angle, bolt, and rod iron has ranged between 7·29*l.* and 13·09*l.* per ton in the same years, and so of other iron articles—again a variation of 100 per cent., and this time in the value of 10 per cent. of our exports; therefore a variation of 10 per cent. in our whole trade, which may have been either neutralised or aggravated in the way above explained.

“There can be no question then of the importance of having regard to prices in an inquiry as to the amount of our foreign trade from time to time. Making all allowances for variations in the intrinsic nature of the articles exported, a group of articles being composed in different proportions of more and less valuable units in different years, we cannot but assume that these variations in price correspond in the main to actual changes in market prices; that there is no serious change in the composition of the different groups to make the comparison misleading.

“An inspection of this first table appears likewise to show that the prices of a majority of the articles rise in certain years and fall in others, so that on the average there must be a general rise or fall of prices, which will swell the values of the trade at one time and diminish them at another. We find, for instance, that in 1865, as compared with 1861, the prices of all textile manufactures rose greatly, and that the metals with their manufactures also advanced, these groups of articles constituting about 60 per cent. of the whole export trade. In 1873, as compared with 1868, there was a rise in the metals and all the textile manufactures except cotton, which had remained stationary in price, so that with only a moderate advance in minor articles, some of which, however, such as coal, had greatly risen, there was enough change in leading articles to cause a swelling of the aggregate export values. In the same way there is a noticeable decline in the articles above enumerated between 1865 and 1868, and again between 1873 and 1877, which would apparently help to account largely for the reduction of values in 1868 and in 1877. Those who will take the trouble to compare

the prices in detail with the quantities and values recorded in the *Statistical Abstract*, will perceive at once that there is here an important cause of variation, which ought to be recognised in some way or other in the discussion of the changes in our export trade.

“It would only be possible, of course, to bring out directly the full effect of changes of prices on the aggregate values of trade by an elaborate comparison of one year with another in detail, by applying the prices of the exports of one year to the quantities exported in each of all the other years, and observing the result. Such a comparison, however, would be apt to confuse and bewilder, and the results difficult to express. I have, therefore, endeavoured in the *second* and *third* tables to arrange a plan for the convenient expression of the *average* change of prices from year to year, and the effect this would have on the total values of the trade.

“This plan is based on the use of an ‘index number,’ such as economists of authority have suggested for showing average rises or falls in price. As it is obvious that all articles do not enter into consumption or into use in equal amounts, an assumption is made, with more or less data to support it as to the relative importance of each article or of the groups which certain articles are selected to represent. The aggregate is represented by a certain number which is formed by the addition of the values assigned to the different representative articles—the normal aggregate being commonly 100 or 1,000 or some such large figure, though any figure may be taken, provided the assigned proportions of each article to the total are maintained. An index number being thus formed, an average rise or fall may be shown by calculating the percentage of the rise or fall of each article on the portion of the index number assigned to it, the differences between the percentages of increase or decrease constituting an addition to or a reduction from the index number, which immediately shows whether there has been an average rise or fall and how much. To use a simple illustration, we may have an index number thus constituted :—

Cotton	40
Wool	20
Iron	20
Other metals.....	20
<hr/>	
Total	100
<hr/>	

And if there is a rise of 20 per cent. in cotton, 60 per cent. in wool, 50 per cent. in iron, and 100 per cent. in other metals, we should get a new index number thus :—

	Original Index Number.	Average Rise per Cent.	Amount of Rise.	New Number.
Cotton	40	20	8	48
Wool	20	60	12	32
Iron	20	50	10	30
Other metals	20	100	20	40
<hr/>		<hr/>		
	100	—	50	150

"On the average there would be a rise of 50 per cent. on these articles, and if they constituted the whole export trade of the country, and the quantities were unchanged in the years compared, such a rise would cause an increase of the values of the exports, which would be a very different thing from an increase of trade where the quantities had increased as well. It is this idea which I have endeavoured to apply to the export trade. I have first tried to obtain a suitable index number for the entire articles constituting our export trade, as far as they are separately enumerated in the abstract, and where quantities and values are given; and taking the prices of 1861 as a basis, I have tried to show how much the index number has been made to vary in certain years by changes in the price of each constituent of the number.

"To get the 'index number' my plan has been to ascertain the percentage proportions of the value of the exports of each enumerated article to the value of the whole export trade in alternate years since 1861, and to add the proportions for each year together. The result is, that although no two years are alike in detail, the proportion of all these articles together to the entire export trade does not vary greatly from year to year. The proportion—

	Per Cent.
In 1861 was	75·7
" '63 "	77·6
" '65 "	78·5
" '66 "	79·9
" '68 "	80·4
" '70 "	78·8
" '71 "	76·9
" '73 "	75·1
" '75 "	73·1
" '77 "	74·6

"How these aggregates are made up will be seen in detail by reference to Table II, and the net result I have found is that for calculating changes in average prices it does not matter greatly which aggregate is taken to form an index number. The average rises or falls would be not quite the same, but would be in the same direction with one aggregate as with another. I have selected for use the aggregate of 1875, which happened to be the latest year for which the figures were obtainable when the earlier part of this investigation was made.

"Using this aggregate, I have next, in Table III, exhibited the effect upon it of the average rises or falls in price in certain years, taking the prices of 1861 as a basis. These years are 1865 and 1873, which were both years of maximum inflation, and 1868, 1875, 1876, and 1877, which were all years of depression, 1868 belonging to the depression which followed 1866, and 1875, 1876, and 1877 belonging to the depression of the present time which followed the great inflation of 1871-73. The percentages of increase or decrease on the prices of 1861 are first stated, and then the effect of these on the different constituents of the index number and the aggregate. The net result is that, as compared with 1861, the index number of

73·1 was increased in 1865 by 22·71, and in 1873 by 20·60. That is to say, in any comparison of these enumerated articles of export, the total values would be found on the average to have increased in the proportion of 73·1 to 95·81 and 93·70 in 1865 and 1873 respectively, irrespective of any increase in the quantities of the trade. In other words, if the index number is a fair one, and if the articles unenumerated or not entered by quantities have been subject to similar variations of price, the value of the exports of 1865 and 1873 in comparison with a year like 1861 would fall to be reduced by 25 per cent. or more. The exports of British and Irish produce in 1873 being altogether 255,164,000*l.*, and in 1865, 165,836,000*l.*, a reduction of 25 per cent. would bring them down to about 192 and 125 millions respectively, in which case they would show a much less increase on 1861 than they now do.

“The process is even more interesting when applied to the years of depression. We find that in 1868, although it was a year of depression, prices cannot have fallen so low as in 1861. The index number, on the contrary, would fall to be increased by 9·99, so that in a comparison of the trade of 1868 with 1861 the increase in the former year must be due to some extent to an increase of price. In 1875, again, matters would appear to have been in much the same position as in 1868, the addition to the index number, as compared with the prices of 1861, being 8·26. But in 1876 and 1877 there has been a further decline of prices. The addition to the index number in 1876 is only 1·17, and in 1877 there would actually be a reduction of 2·04 as compared with 1861. In other words, the average prices of exports were lower in 1877 than they had been since 1861, and were below the level of 1861 in the proportion of 71·06 to 73·1, or about 3 per cent. On the assumption that the prices of the unenumerated exports and of exports entered by value only had varied as the enumerated exports, which seems a fair enough assumption to make, and that the index number is itself a fair mode of proceeding, this result must be accepted. It follows, then, that a considerable part of the falling off of our exports exhibited of late is due to a falling off of price. As compared with 1873 the fall of price in 1877 may be stated on the average as something like 25 per cent. In 1878, judging by the prices of cotton, the metals, and other leading articles, there has been a further fall of price, but it would be useless to enter into details until the average of the whole year is made up.

“I have referred already to the fact of its being a matter of comparatively little importance which index number of all the different years compared in Table II is taken; but while I do not think it worth while to incumber the tables with the work, I may state that if I had taken the index numbers of 1861 or 1873 to work with, instead of the index number of 1875, the additions or deductions from the index number in 1873 and 1877 would have compared as follows with the figures above given:—

	1873.	1877.
Index number of 1875	+ 20'60	- 2'04
" '73	+ 25'12	- 1'60
" '61	+ 19'02	- 1'21

Even if we had changed the index number, then the results would probably have been much the same. In Table II, in any case, the index numbers of the alternate years are stated, and as the percentage of rises or falls of price are stated in each case, the calculation can be checked or rectified with some other index number by any one interested.

"Not to leave any practical doubt, however, that there has been a gigantic fall of prices on the average in the recent years of depression, that is between 1873 and 1877, which are the subject of most immediate interest, I have applied in this instance the method above referred to of calculating the values for one year on the quantities of that year and the prices of another year with which comparison is made. I have applied the prices of 1873 to the quantities of the exports of 1877. The result is seen in Table IV. In this table the quantities of the articles exported in 1873 and 1877 are directly compared, the prices of 1873 are stated, and then a comparison is made between the values recorded in 1873 and the values calculated for 1877 on the prices of 1873. The final result is that while the declared value of the articles in question in 1873 was 192,454,000*l.*, the value of the quantities of the same articles actually exported in 1877 was, at the prices of 1873, 191,530,000*l.*, or hardly a perceptible falling off. We may safely say, then, that the reduction of our export trade since 1873 is not a reduction of the volume of trade, looking at the quantities of the articles concerned, but is a reduction of price only.

"To put the matter another way, it appears that the value of the exports of these enumerated articles actually declared in 1877 was 147,801,000*l.*, as compared with the above sum of 191,530,000*l.*, which is the value they would have been entered at with the prices of 1873. The difference is 43,729,000*l.*, which amounts to 22'3 per cent., by which the average prices in 1877 have been reduced as compared with 1873. While this result strengthens the general method of comparison employed in these tables, it may be pointed out that it is in itself exact and beyond question. The fact of an average fall of price in 1877 compared with 1873, accounting for almost the entire decrease of the export trade between those years, appears to be beyond dispute.

"It would be out of place for me to enter into any discussion in this place as to how far a decline of nominal trade, which consists merely of a fall in price, is injurious or the reverse. There seems no doubt, however, that a fall in price may affect the profits of trade very much, and I may perhaps be permitted to point out therefore that in noticing a fall of price as accounting for the diminution of the exports, I am not saying that the explanation is entirely satis-

factory in substance. To show that the fall of price is immaterial and is not improbably directly beneficial to trade by diminishing the capital required in it, as well as indirectly by stimulating a new demand, it would be necessary to see how far the falling off is due to the falling off in value of the raw material imported, or is accompanied by a reduction in the price of the chief articles of labourers' and workmen's consumption, which would justify a fall in nominal wages. That there has been a reduction of the price of raw material imported is certain, this being especially manifest as regards cotton, where the fall in the price of the raw material undoubtedly accounts for most of the falling off of the export value of the manufactured article; but a large part of our foreign export trade consists of articles which are wholly or largely the exclusive product of the mineral, agricultural, and manufacturing industry of the United Kingdom. It would be most difficult to show that the real return to this industry at the recorded prices of the exports is as great as it was in consequence of a corresponding fall in the prices of articles of general consumption. That there has been an average fall of a serious description is certain, but what it is on the average cannot be shown in the same convenient way as the fall in the exports itself has been demonstrated. To the extent it has occurred, we should be bound to conclude that our export trade in 1877 was just as profitable as in 1873, or indeed more profitable as requiring less nominal capital to do the work. On the other hand, the fact that the trade in 1877 is no greater than in 1873 amounts to a real retrogression, allowing for the increase of population which must have occurred in the interval.

"Another matter to which I may be permitted to call special attention is the great decline in prices at the present time. The average level is much lower than in 1868, and lower even than in 1861, which was the starting point. The extreme high price in 1873 was also lower, it will have been noticed, than the extreme in 1865, the maximum year of the previous inflation. I should like to suggest for inquiry, whether this may not possibly be connected with the scarcity of gold, whether temporary or permanent, which has been so much talked of in recent years.

"I am only calling attention of course to a probable explanation of a peculiar phenomenon noticeable in dealing with these export prices. If there is any truth in it at all the subject is clearly one which would demand a more ample investigation both of the alleged fact of scarcity and its causes, and the probability of its continuance, than it would be possible here to give to it."

I.—Statement showing the Average Price of the undermentioned Articles of British Produce
stated in the Statistical Abstracts of the United

Articles.		1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.
Alkali.....	cwts. s.	8'52	8'45	8'11	8'36	8'74	10'76	10'27	8'57
Animals—Horses.....	No. £	80'51	62'49	51'85	49'51	42'13	41'14	42'95	48'95
Arms, &c.—									
Fire arms.....	No. s.	32'67	44'82	38'98	27'42	29'20	26'10	29'91	32'58
Gunpowder.....	lbs. d.	7'40	7'18	7'02	6'67	6'52	6'34	6'16	5'66
Bags, empty.....	doz. s.	9'57	9'69	12'42	15'42	12'24	10'56	8'97	8'03
Beer and ale.....	brls. s.	74'58	68'66	71'04	73'82	73'36	72'94	73'66	75'27
Books, printed.....	cwts. £	14'43	14'97	13'89	13'69	12'94	12'39	12'26	11'14
Butter.....	„ s.	96'25	92'85	91'97	96'68	103'59	107'68	96'10	102'34
Candles.....	doz. lbs. s.	11'87	11'05	9'89	9'05	8'18	8'64	8'95	9'05
Carriages, railway	No. £	140'68	83'35	102'78	103'37	108'20	118'00	111'59	108'25
Cement.....	cwts. s.	2'65	2'51	2'52	2'48	2'53	2'59	2'50	2'44
Cheese.....	„ s.	82'32	78'44	76'79	80'55	81'72	86'76	85'74	81'86
Coals, &c.....	tons s.	9'19	9'05	9'00	9'48	9'69	10'29	10'39	9'92
Cordage and twine	cwts. s.	48'39	49'67	52'06	52'86	49'26	55'32	56'56	57'42
Corn—									
Wheat.....	cwts. s.	13'18	12'98	11'21	10'66	10'65	12'13	14'84	15'68
Wheat flour.....	„ s.	18'16	18'84	16'58	16'12	15'75	17'42	21'73	19'66
Cotton yarn.....	lbs. d.	12'54	15'97	26'01	28'80	23'98	23'66	21'11	20'27
Cotton manufactures—									
Piece goods.....	yds. d.	3'02	3'66	4'97	5'79	5'05	5'09	4'13	3'67
Printed.....	„ d.	4'11	4'57	5'71	6'32	5'81	5'91	5'28	4'83
Mixed materials	„ d.	7'10	6'54	7'41	9'35	8'86	9'85	9'92	9'00
Fish—Herrings.....	brls. s.	28'20	27'07	22'84	25'77	28'40	28'42	27'54	27'98
Glass—									
Plate.....	sq. ft. s.	2'67	2'38	2'44	2'57	2'22	2'40	2'06	2'04
Flint.....	cwts. s.	55'18	58'12	62'29	60'96	60'84	54'98	53'86	51'92
Common, bottles	„ s.	10'16	10'08	10'18	10'01	9'97	10'13	9'98	9'93
Of other sorts.....	„ s.	26'62	22'83	24'58	24'94	23'89	25'98	25'72	23'70
Hats of all sorts.....	dozs. s.	36'35	36'19	37'01	36'53	38'66	37'10	37'52	34'33
Leather, tanned—									
Unwrought.....	cwts. £	8'99	9'42	9'40	10'00	9'57	11'27	9'55	9'01
Wrought—									
Boots and shoes doz. prs. s.	*—	73'11	75'83	73'46	66'57	67'54	69'54	63'63	
Other sorts.....	lbs. s.	*—	4'25	4'63	4'15	3'39	4'13	4'40	4'05
Linen and jute yarn—									
Linen yarn.....	lbs. d.	13'91	13'65	15'80	17'90	16'54	16'95	17'29	16'91
Jute yarn.....	„ d.	2'90	3'49	5'02	5'00	3'99	3'98	3'73	3'73
Linen and jute manufactures—									
White or plain.....	yds. d.	7'16	6'84	7'55	8'39	8'06	8'23	7'79	7'50
Printed.....	„ d.	9'87	9'02	9'74	10'03	9'21	9'89	9'74	9'31
Sailcloth and sails....	„ d.	11'89	12'28	12'58	13'67	12'73	12'75	12'88	13'39
Jute manufactures.....	„ d.	4'68	4'59	5'29	6'16	4'86	4'48	4'09	3'94

* Not separately

exported from the United Kingdom, deduced from the declared Quantities and Values (as Kingdom), in each of the Years 1861 to 1877.

1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	Articles.
7 ⁸⁵ 61 ¹⁹	7 ⁷¹ 35 ⁴⁵	8 ³⁷ 38 ¹⁹	11 ¹⁷ 53 ¹⁴	12 ³² 62 ⁹⁵	10 ⁴⁵ 67 ³⁷	9 ¹⁶ 76 ⁹¹	8 ¹⁵ 81 ⁴³	7 ⁷³ 74 ⁴³	s. cwts. Alkali £ No. Animals—Horses
									Arms, &c.—
23 ⁶³ 5 ⁷² 7 ⁹⁷ 76 ⁴⁶ 11 ⁴¹ 105 ⁷⁶ 8 ⁷⁸ 114 ³⁸ 2 ⁴⁴ 85 ⁶¹ 9 ⁶² 56 ⁷¹	35 ²⁵ 5 ⁹¹ 7 ³⁸ 72 ²⁰ 11 ⁶⁴ 109 ⁸⁰ 8 ²² 103 ⁴⁷ 2 ⁴³ 87 ⁵² 9 ⁶⁴ 55 ⁹¹	39 ⁰³ 5 ⁷⁴ 8 ³³ 76 ⁷⁴ 11 ⁵⁶ 116 ²⁷ 7 ⁷⁸ 106 ⁸¹ 2 ⁴⁴ 85 ⁶⁸ 9 ⁸⁰ 55 ⁷⁷	24 ⁴⁹ 5 ⁸⁶ 8 ⁸³ 79 ⁸⁹ 10 ⁸⁶ 112 ²³ 7 ⁸⁹ 98 ⁵⁴ 2 ⁴⁵ 84 ⁷⁶ 15 ⁸³ 57 ⁹⁷	29 ¹³ 6 ³⁸ 8 ⁶⁴ 82 ⁸¹ 10 ⁸⁸ 118 ¹⁴ 8 ⁰⁴ 111 ⁶⁸ 3 ⁰⁴ 86 ³⁰ 20 ⁹⁰ 59 ⁷⁰	32 ⁰⁸ 6 ⁶⁸ 7 ⁴³ 87 ⁵⁶ 10 ⁷³ 121 ⁵⁰ 8 ²⁶ 116 ²⁷ 2 ⁹⁸ 87 ²⁷ 17 ²¹ 56 ¹³	41 ¹⁹ 6 ³¹ 6 ⁸⁸ 83 ⁰⁴ 10 ⁶⁹ 122 ³⁸ 8 ⁰⁰ 103 ⁴⁰ 2 ⁶¹ 82 ⁶⁴ 13 ²⁸ 55 ¹⁹	26 ⁶⁹ 6 ⁰⁵ 6 ⁰³ 79 ³¹ 10 ⁷⁴ 125 ³⁰ 7 ⁷² 97 ²¹ 2 ⁵⁵ 80 ⁶⁷ 10 ⁹³ 55 ⁰⁷	21 ⁰⁵ 5 ⁸⁶ 6 ¹⁷ 82 ⁵² 10 ⁶⁴ 132 ¹⁶ 7 ⁷³ 84 ³⁶ 2 ⁵⁸ 83 ²⁰ 10 ¹⁷ 55 ⁴⁹	s. No. Fire arms d. lbs. Gunpowder s. doz. Bags, empty s. brls. Beer and ale £ cwts. Books, printed s. „ Butter s. doz. lbs. Candles £ No. Carriages, railway s. cwts. Cement s. „ Cheese s. tons Coals, &c. s. cwts. Cordage and twine
13 ⁰⁵ 16 ⁶⁷ 20 ⁰⁴	11 ⁷⁷ 16 ³¹ 18 ⁹²	13 ¹¹ 16 ⁵¹ 18 ⁶⁶	12 ⁸¹ 17 ⁴⁸ 18 ⁸⁷	13 ⁴⁷ 18 ⁹⁷ 17 ⁷⁶	13 ³⁵ 18 ¹⁷ 15 ⁷⁹	11 ²⁶ 14 ⁹⁰ 14 ⁶⁶	10 ⁵⁴ 14 ⁹³ 13 ¹⁹	13 ⁰⁰ 17 ⁴³ 12 ⁸⁵	Corn— s. cwts. Wheat s. „ Wheat flour d. lbs. Cotton yarn
3 ⁷⁹ 4 ⁹¹ 9 ⁶⁸ 28 ⁵²	3 ⁵⁵ 4 ⁷⁵ 8 ⁵⁷ 24 ⁷¹	3 ³³ 4 ⁷¹ 8 ²⁷ 26 ⁹²	3 ⁵¹ 4 ⁹² 8 ⁵⁷ 28 ²³	3 ⁴⁵ 4 ⁷⁸ 9 ²⁹ 28 ³⁸	3 ²² 4 ⁶⁹ 9 ⁶⁸ 28 ⁵⁴	3 ¹³ 4 ⁷⁷ 9 ²⁰ 27 ⁹⁴	2 ⁸³ 4 ⁴⁸ 8 ⁷¹ 34 ³⁵	2 ⁸³ 4 ³¹ 7 ⁴⁸ 32 ⁵¹	Cotton manufactures d. yds. Piece goods d. „ Printed d. „ Mixed materials s. brls. Fish—herrings
2 ³⁴ 53 ⁴² 9 ⁹¹ 23 ²⁷ 31 ⁰⁵	2 ¹⁴ 53 ⁷⁶ 9 ⁹⁹ 23 ⁴⁴ 31 ¹⁷	1 ⁹⁵ 48 ⁴² 9 ⁷¹ 31 ⁵⁷ 29 ⁵⁸	2 ²⁹ 53 ¹⁸ 9 ⁸¹ 31 ⁸⁰ 29 ⁰⁷	3 ⁰¹ 57 ⁸⁸ 10 ¹⁸ 33 ⁰⁶ 29 ⁴⁶	3 ⁰⁶ 59 ⁶⁵ 10 ⁴¹ 33 ⁰¹ 29 ⁸⁷	2 ⁶² 60 ⁰⁹ 11 ⁰⁸ 30 ⁷³ 27 ⁶⁰	2 ²² 58 ⁶¹ 11 ¹⁵ 30 ⁶² 25 ⁷⁸	2 ²² 55 ⁷⁸ 10 ⁹⁹ 28 ⁹⁴ 24 ⁹¹	Glass— s. sq. ft. Plate s. cwts. Flint s. „ Common bottles s. „ Of other sorts s. doz. Hats, of all sorts
8 ³⁹ 60 ⁸² 4 ⁴⁵	8 ²⁰ 61 ⁶⁴ 4 ²⁶	8 ¹³ 59 ⁷² 3 ²⁹	8 ⁷⁸ 58 ⁵⁴ 3 ⁸⁹	9 ⁰⁰ 64 ⁷³ 3 ⁶⁸	8 ⁹⁰ 67 ⁰² 3 ⁷⁷	8 ⁸⁹ 65 ⁵⁶ 4 ⁰⁸	8 ⁰⁸ 63 ³⁵ 4 ³⁷	8 ⁰⁷ 61 ²⁸ 4 ¹²	Leather, tanned— £ cwts. Unwrought Wrought s. doz. prs. Boots and shoes s. lbs. Other sorts.
16 ¹⁹ 3 ⁷⁸	14 ⁴² 3 ⁷²	14 ⁶⁹ 4 ⁵⁹	16 ⁴⁰ 4 ⁹³	16 ⁵¹ 4 ⁰⁴	15 ¹⁷ 3 ⁷⁵	15 ⁹⁵ 3 ⁴⁰	15 ⁶² 3 ²⁶	16 ¹³ 3 ⁴⁸	Linen and jute yarn— d. lbs. Linen yarn d. „ Jute yarn
7 ⁰⁶ 9 ⁰³ 14 ²⁰ 3 ⁵⁶	7 ¹⁵ 8 ¹⁵ 12 ⁶⁵ 3 ⁶⁵	7 ³⁹ 8 ⁰⁴ 12 ⁹⁴ 3 ⁹⁵	7 ⁴³ 7 ⁵⁸ 14 ²⁹ 4 ²²	7 ⁶² 7 ⁶³ 13 ⁹⁷ 3 ⁹⁸	7 ⁸⁰ 7 ⁶⁸ 14 ⁴¹ 3 ⁵⁷	7 ⁵⁹ 8 ²¹ 14 ³⁶ 3 ³⁴	7 ¹⁴ 8 ¹⁹ 14 ³⁷ 3 ⁰⁹	6 ⁹³ 7 ⁸⁶ 13 ⁷¹ 3 ¹⁸	Linen and jute manufactures— d. yds. White or plain d. „ Printed d. „ Sailcloth and sails d. „ Jute manufactures

I.—Statement showing the Average Price of the undermentioned Articles

Articles.		1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.
Metals—									
Iron—									
Old	tons £	3'86	3'82	3'64	3'96	4'25	4'22	3'97	3'96
Pig and puddled....	„ s.	51'77	54'13	55'23	60'62	58'41	61'62	58'20	57'23
Bar, angle, bolt and rod	„ £	7'29	7'31	7'77	9'18	8'65	8'64	7'78	7'55
Railroad of all sorts	„ £	7'70	7'03	7'34	8'10	8'18	8'40	8'37	7'99
Wire (except tele- graph)	„ £	17'44	21'35	20'16	21'47	19'64	20'56	19'70	19'36
Sheets and plates....	„ £	*—	10'43	10'85	12'45	12'38	12'07	11'51	11'19
Galvanised	„ £	*—	24'43	24'73	26'04	25'04	24'09	22'31	21'58
Hoops	„ £	9'11	8'75	8'84	10'69	10'23	10'01	9'58	8'89
Tinned plates	„ £	25'00	24'22	23'47	25'19	23'61	26'71	26'11	23'67
Cast or wrought, &c.	„ £	15'67	15'35	15'32	16'72	15'23	16'19	14'48	13'99
Steel, unwrought....	„ £	33'33	32'93	32'61	33'18	32'76	32'69	32'60	32'18
Manufactures of steel, &c.}	„ £	*—	61'37	71'49	78'95	68'62	52'41	66'77	56'11
Copper—									
Unwrought—									
Ingots, cakes, &c.	cwts. £	4'96	4'89	4'65	4'88	4'45	4'51	4'05	4'07
Wrought or partly wrought—									
Yellow metal	cwts. £	4'34	4'18	4'08	4'31	4'10	4'04	3'71	3'44
Of other sorts.....	„ £	5'29	5'24	4'97	5'28	5'03	4'90	4'30	4'22
Brass of all sorts ...	„ £	5'62	5'36	5'05	5'48	5'25	5'45	4'67	4'84
Lead—pig, sheet, and pipe	tons £	21'65	21'00	21'30	21'61	21'05	21'73	21'04	20'17
Tin, unwrought	cwts. £	6'07	5'79	5'81	5'40	4'80	4'46	4'56	4'69
Zinc, wrought and unwrought	„ s.	21'83	20'21	20'13	21'60	21'22	23'99	21'97	21'79
Oil—seed	galls. s.	2'59	3'06	3'42	2'99	2'78	3'16	3'11	2'80
Paper (other than hangings)	cwts. £	3'96	3'94	3'43	3'29	3'19	3'11	2'92	2'95
Salt	tons s.	10'53	9'46	9'17	9'27	9'49	12'12	12'31	12'18
Silk manufactures—									
broad piece goods }	yds. s.	*—	3'14	3'44	3'88	3'83	3'97	4'09	3'89
Soap	cwts. s.	24'71	26'05	25'86	25'43	26'28	27'48	26'37	26'05
Spirits, British.....	galls. s.	2'37	2'69	2'23	2'40	2'46	2'57	2'53	2'48
Sugar, refined	cwts. s.	49'24	49'80	36'23	33'42	30'24	30'05	30'84	34'63
Wool, sheep and lambs	lbs. d.	17'46	17'79	20'07	22'08	23'89	22'08	21'01	18'57
Woollen and worsted yarn	„ d.	30'13	32'47	36'92	40'30	40'31	41'06	37'28	34'78
Woollen and worsted manu- factures—									
Cloths, &c.	yds. d.	29'53	30'36	34'28	36'74	37'70	39'15	40'99	36'66
Flannels, &c.	„ d.	18'47	18'64	19'59	19'92	19'55	19'24	18'54	18'17
Worsted stuffs, &c....	„ d.	11'99	12'98	12'07	13'84	13'76	14'04	14'54	13'99
Carpets, &c.....	„ d.	30'01	29'95	31'09	34'50	36'00	38'45	39'62	35'59

* Not separately

of British Produce Exported from the United Kingdom—Contd.

1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	Articles.
									Metals—
									Iron—
4'06	4'70	4'81	6'10	6'62	5'69	4'76	4'25	4'31	£ tons
57'84	59'18	61'08	100'85	124'65	94'67	72'80	62'47	57'34	s. „
7'52	8'14	8'37	11'58	13'09	11'80	9'87	8'53	7'77	£ „
8'15	8'27	8'24	10'82	13'27	12'31	9'99	8'92	7'76	£ tons
18'82	18'75	17'03	20'06	23'52	20'98	18'48	16'39	14'72	£ „
11'27	11'40	11'79	15'56	17'95	17'39	15'18	14'28	12'79	£ tons
20'56	20'79	20'57	26'22	26'95	25'55	24'46	22'82	20'37	£ „
9'01	9'31	9'41	13'02	14'58	13'32	11'16	9'58	8'55	£ „
23'83	23'66	24'25	32'24	32'77	30'21	26'64	21'81	19'80	£ „
13'49	14'27	14'75	17'70	19'43	19'93	18'10	16'56	14'32	£ „
31'01	31'58	30'58	32'88	37'11	38'29	35'96	34'08	33'26	£ „
54'17	51'49	52'37	54'74	69'55	78'75	75'07	73'60	63'34	£ „
									Copper—
									Unwrought—
4'00	3'73	3'78	4'81	4'68	4'40	4'40	4'13	3'78	£ cwts.
									Ingots, cakes, &c.
									Wrought or partly wrought
3'36	3'25	3'35	4'11	4'29	4'04	3'91	3'73	3'54	£ cwts.
4'20	3'96	4'12	5'23	5'18	5'00	4'98	4'62	4'34	£ „
4'68	4'30	4'51	5'47	5'99	6'30	5'44	5'20	4'80	£ „
20'13	19'80	19'27	20'45	23'75	22'63	23'17	22'55	21'49	£ tons
5'81	6'23	6'70	7'47	6'83	5'24	4'57	3'96	3'68	£ cwts.
20'49	19'23	17'87	20'17	24'92	24'91	23'82	23'01	20'70	s. „
2'59	2'63	2'69	2'78	2'64	2'33	2'13	2'09	2'38	s. galls.
2'80	2'99	2'93	2'89	3'04	3'10	2'96	2'97	2'81	£ cwts.
10'34	9'99	10'47	14'15	18'77	16'00	14'75	12'35	11'10	s. tons
									Oil—seed
3'90	3'84	3'32	3'15	3'54	3'36	3'08	3'29	3'22	s. yds.
28'36	27'79	27'14	26'04	26'45	25'35	24'74	24'58	24'45	s. cwts.
2'51	2'52	2'50	2'50	2'50	2'51	5'01	4'85	4'89	s. galls.
36'14	32'25	31'85	32'08	30'02	26'50	23'64	22'88	27'56	s. cwts.
17'83	15'31	16'64	19'86	21'18	21'92	21'14	18'53	17'73	d. lbs.
35'74	33'73	33'49	36'91	37'26	38'14	38'58	34'36	32'12	d. lbs.
									Woollen and worsted manufactures—
36'37	35'17	37'52	41'19	41'00	39'53	39'09	38'25	35'72	d. yds.
17'68	17'28	17'55	17'65	18'10	19'76	18'47	17'52	17'58	d. „
14'52	14'03	14'02	14'54	12'11	10'93	10'64	9'90	9'52	d. „
36'45	35'67	36'10	38'93	38'64	38'60	37'00	34'75	31'52	d. „

II.—Statement showing the Proportion per Cent. which the Value of each Specified Article of British and Irish Produce bears to the Total Value of Articles of British and Irish Produce Exported from the United Kingdom in each of the undermentioned Years.

Articles.	1861.	1863.	1865.	1866.	1868.	1870.	1871.	1873.	1875.	1877.
Alkali	0·5	0·6	0·7	0·9	0·8	0·7	0·8	1·1	1·0	1·1
Animals—Horses	0·2	0·2	0·1	0·1	0·1	0·1	0·1	0·1	0·1	0·1
Arms, &c.—										
Fire arms	0·4	0·6	0·3	0·2	0·4	0·4	0·4	0·2	0·3	0·1
Gunpowder	0·3	0·3	0·3	0·2	0·2	0·2	0·2	0·2	0·2	0·2
Bags, empty	0·2	0·4	0·4	0·4	0·5	0·5	0·5	0·8	0·5	0·8
Beer and ale	1·1	1·2	1·2	1·1	1·0	0·9	0·8	0·9	0·9	1·0
Books, printed	0·4	0·3	0·3	0·3	0·4	0·3	0·3	0·4	0·4	0·5
Butter	0·4	0·3	0·2	0·2	0·2	0·2	0·1	0·1	0·1	0·1
Candles, of all sorts	0·3	0·2	0·1	0·1	0·1	0·1	0·1	0·1	0·1	0·1
Carriages, railway	0·2	0·2	0·1	0·1	0·2	0·2	0·2	0·1	0·2	0·1
Cement	0·2	0·2	0·1	0·1	0·2	0·2	0·2	0·3	0·3	0·3
Cheese	0·1	0·1	0·1	0·1	0·1	0·1	—	—	—	—
Coals, &c.	2·9	2·6	2·7	2·8	3·0	2·8	2·8	5·2	4·3	3·9
Cordage and twine.....	0·2	0·3	0·2	0·2	0·2	0·2	0·2	0·1	0·1	0·1
Corn—										
Wheat	0·8	0·1	—	0·1	0·1	0·3	1·0	0·3	—	0·1
Wheat flour	0·1	—	—	—	—	0·1	0·2	—	—	—
Cotton yarn	7·4	5·5	6·2	7·2	8·2	7·4	6·8	6·2	5·9	6·1
Cotton manufacture—										
Piece goods, plain	17·4	15·2	16·4	18·7	17·3	17·0	14·9	13·4	14·9	16·0
Printed	11·4	9·7	10·3	11·7	10·5	9·6	8·8	8·4	8·9	10·2
Of mixed materials	0·1	0·7	0·4	0·3	0·1	0·2	0·3	0·2	0·2	0·2
Fish—Herrings	0·4	0·3	0·3	0·3	0·3	0·4	0·4	0·4	0·4	0·5
Glass—										
Plate	—	—	—	—	0·1	0·1	0·1	0·1	0·1	0·1
Flint	0·2	0·2	0·2	0·1	0·1	0·1	0·1	0·1	0·1	0·1
Common bottles.....	0·2	0·2	0·2	0·2	0·2	0·2	0·1	0·2	0·2	0·2
Of other sorts	—	0·1	—	—	—	—	0·1	0·1	0·1	0·1
Hats, of all sorts.....	0·3	0·3	0·3	0·3	0·3	0·3	0·3	0·3	0·5	0·6
Leather, tanned—										
Unwrought	0·3	0·3	0·2	0·2	0·3	0·4	0·5	0·4	0·7	0·6
Wrought—										
Boots and shoes.....	*1·3	1·0	0·9	0·5	0·8	0·6	0·7	0·7	0·7	0·7
Other sorts	*0·1	0·1	0·1	0·2	0·1	0·2	0·2	0·1	0·2	0·2
Linen and jute yarn—										
Linen yarn	1·3	1·7	1·5	1·3	1·3	1·1	1·0	0·8	0·2	0·6
Jute yarn	0·1	0·1	—	0·1	0·1	0·1	0·1	0·1	0·1	0·1
Linen and jute manufac- tures—										
White or plain	2·6	3·6	4·5	4·2	3·4	3·1	2·9	2·4	2·6	2·3
Printed, &c.	0·1	0·2	0·4	0·3	0·2	0·2	0·1	0·1	0·2	0·2
Sailcloth and sails	0·1	0·2	0·2	0·2	0·1	0·1	0·1	0·1	0·1	0·1
Jute manufactures	0·1	0·2	0·2	0·2	0·4	0·4	0·5	0·6	0·6	0·8

* Percentage which the value of the quantity exported in 1862 bears to the total value of exports in 1862; the article not being separately entered in 1861.

II.—Value of each Specified Article of British and Irish Produce—Contd.

Articles.	1861.	1863.	1865.	1866.	1868.	1870.	1871.	1873.	1875.	1877.
Metals :										
Iron—										
Old	—	—	—	—	0·2	0·3	0·3	0·2	—	0·1
Pig and puddled	0·8	0·9	1·0	0·8	0·9	1·1	1·4	2·8	1·5	1·3
Bar, angle, &c.	1·5	1·8	1·3	1·2	1·3	1·3	1·3	1·5	1·2	1·0
Railroad	2·3	2·2	2·1	2·2	2·6	4·4	3·6	4·1	2·4	1·9
Wire (except telegraph)	0·2	0·3	0·3	0·2	0·2	0·2	0·2	0·3	0·4	0·4
Sheets and plates	*0·5	0·6	0·5	0·5	0·5	0·5	0·5	0·8	0·6	0·6
Galvanised	*0·2	0·3	0·3	0·3	0·3	0·2	0·2	0·3	0·5	0·6
Hoops	0·2	0·3	0·2	0·2	0·3	0·3	0·3	0·3	0·3	0·2
Tinned plates	0·7	0·9	0·9	1·0	1·2	1·2	1·3	1·5	1·6	1·5
Cast or wrought	2·2	2·0	2·0	1·8	1·6	1·7	1·6	2·1	1·9	1·8
Steel unwrought	0·6	0·6	0·5	0·6	0·6	0·6	0·5	0·6	0·5	0·4
Manufactures of steel, &c.	*0·3	0·3	0·3	0·2	0·3	0·3	0·3	0·3	0·4	0·4
Copper—										
Unwrought—										
Ingots, cakes, &c.	0·3	0·8	0·3	0·3	0·4	0·4	0·5	0·5	0·4	0·4
Wrought or partly wrought—										
Yellow metal	0·5	0·7	0·5	0·4	0·5	0·4	0·4	0·4	0·5	0·6
Of other sorts	0·9	1·3	1·0	0·7	0·8	0·6	0·5	0·4	0·5	0·5
Brass, of all sorts	0·1	0·2	0·1	0·1	0·1	0·1	0·1	0·2	0·2	0·2
Lead—Pig, sheet, and pipe	0·3	0·5	0·3	0·3	0·5	0·5	0·4	0·3	0·4	0·5
Tin—Unwrought	0·3	0·4	0·3	0·2	0·2	0·3	0·3	0·3	0·2	0·2
Zinc—Wrought and un- wrought	0·1	0·1	0·1	0·1	0·1	0·1	0·1	—	0·1	0·1
Oil—Seed	0·8	0·7	0·9	0·8	0·7	0·6	0·7	0·6	0·7	1·0
Paper—Other than hang- ings	0·3	0·4	0·3	0·3	0·3	0·3	0·3	0·4	0·4	0·5
Salt	0·3	0·2	0·2	0·2	0·3	0·2	0·2	0·3	0·3	0·2
Silk Manufactures :										
Broad piece goods	*0·3	0·3	0·3	0·3	0·3	0·4	0·4	0·2	0·3	0·4
Soap	0·2	0·2	0·1	0·1	0·1	0·1	0·1	0·1	0·1	0·2
Spirits—British	0·4	0·3	0·1	0·1	0·1	0·1	0·1	0·1	0·1	0·2
Sugar—Refined	0·3	0·3	0·2	0·2	0·3	0·5	0·6	0·4	0·5	0·8
Wool—Sheep and lambs	0·9	0·5	0·5	0·5	0·4	0·3	0·4	0·2	0·4	0·4
Woollen and Worsted—										
Yarn	2·7	3·3	3·1	2·4	3·5	2·5	2·7	2·1	2·3	1·8
Manufactures—										
Cloths, &c.	2·4	2·7	2·4	2·8	2·1	2·4	2·5	2·6	3·1	3·3
Flannels, &c.	0·8	1·0	0·7	0·6	0·5	0·5	0·5	0·4	0·6	0·6
Worsted Stuffs	4·9	5·7	8·1	7·0	7·3	6·9	8·0	5·6	5·0	3·9
Carpets, &c.	0·4	0·6	0·5	0·6	0·6	0·7	0·7	0·6	0·5	0·4
Totals	75·7	77·6	78·5	79·9	80·4	78·8	76·9	75·1	73·1	74·6

* Percentage which the value of the quantity exported in 1862 bears to the total value of exports in 1862; the article not being separately entered in 1861.

III.—Statement showing the Percentage Increase or Decrease in the Price of Various Articles Exported in the Years 1865 and 1873, and 1868 and 1875, as compared with 1861; and the Proportion of the Increase or Decrease Calculated on the Proportion of each Article to the whole Exports in the Year 1875. [See page .

A.—Percentage Increase or Decrease.

Articles.	1865 over 1861.	1873 over 1861.	1868 over 1861.	1875 over 1861.	1876 over 1861.	1877 over 1861.
Alkali	+ 2'58	+ 44'60	+ 0'59	+ 7'51	— 4'34	— 9'27
Animals—Horses	—47'67	— 21'81	—39'20	— 4'47	+ 1'14	— 7'55
Arms, &c.—						
Fire arms	—10'62	— 10'84	— 0'28	+ 26'08	— 18'30	— 35'57
Gunpowder	—11'90	— 13'78	—23'51	— 14'73	— 18'24	— 20'81
Bags, empty	+ 27'90	— 9'72	—16'09	— 28'11	— 36'99	— 35'53
Beer and ale	— 1'64	+ 11'04	+ 0'93	+ 11'34	+ 6'34	+ 10'65
Books, printed	—10'33	— 24'60	—22'80	— 25'92	— 25'57	— 26'27
Butter	+ 7'63	+ 22'74	+ 6'33	+ 27'15	+ 30'18	+ 37'31
Candles, of all sorts	—31'09	— 32'27	—23'76	— 32'60	— 34'96	— 34'88
Carriages, railway	—23'09	— 20'61	—23'05	— 26'50	— 30'90	— 40'03
Cement	— 4'53	+ 14'72	— 7'92	— 1'51	— 3'77	— 2'64
Cheese	— 0'73	+ 4'83	— 0'56	+ 0'39	— 2'00	+ 1'07
Coals, &c.	+ 5'44	+127'42	+ 7'94	+ 44'50	+ 18'93	+ 10'66
Cordage and twine	+ 1'80	+ 23'37	+ 18'66	+ 14'05	+ 13'80	+ 14'67
Corn—						
Wheat	—19'20	+ 2'20	+ 18'97	— 14'57	— 20'03	— 1'37
Wheat flour	—13'27	+ 4'46	+ 8'26	— 17'95	— 17'79	— 4'02
Cotton yarn	+ 91'23	+ 41'63	+ 61'64	+ 16'91	+ 5'18	+ 2'47
Cotton manufactures—						
Piece goods, plain	+ 67'22	+ 14'24	+ 21'52	+ 3'64	— 6'29	— 6'29
„ printed	+ 41'36	+ 16'30	+ 17'52	+ 16'06	+ 9'00	+ 4'87
„ of mixed ma- terials	+ 24'79	+ 30'85	+ 26'76	+ 29'58	+ 22'68	+ 5'35
Fish—Herrings	+ 0'71	+ 0'64	— 0'78	— 0'92	+ 21'81	+ 15'28
Glass—						
Plate	—16'85	+ 12'73	—23'60	— 1'87	— 16'85	— 16'85
Flint	+ 10'26	+ 4'89	— 5'91	+ 8'90	+ 6'22	+ 1'09
Common bottles	— 1'87	+ 0'20	— 2'26	+ 9'06	+ 9'74	+ 8'17
Of other sorts	—10'26	+ 24'19*	—10'97	+ 15'44*	+ 15'03	+ 8'72
Hats, of all sorts	+ 6'35	— 18'95	— 5'56	— 24'07	— 29'08	— 31'47
Leather, tanned—						
Unwrought	+ 6'45	+ 0'11	+ 0'22	— 1'11	— 10'12	— 10'23
Wrought—						
Boots and shoes	— 8'95†	— 11'46†	+ 12'97†	— 10'33†	— 13'35†	— 16'18†
Other sorts	—20'24†	— 13'41†	— 4'71†	— 4'00†	+ 2'82†	— 3'06†
Linen and jute yarn—						
Linen yarn	+ 18'91	+ 18'69	+ 21'57	+ 14'67	+ 12'29	+ 15'96
Jute yarn	+ 37'59	+ 39'31	+ 28'62	+ 17'24	+ 12'41	+ 20'00
Linen and jute manufactures—						
White or plain	+ 12'57	+ 6'42	+ 4'75	+ 6'01	— 0'28	— 3'21
Printed, &c.	— 6'69	— 22'70	— 5'67	— 16'82	— 17'02	— 20'36
Sailcloth or sails	+ 7'06	+ 17'49	+ 12'62	+ 20'77	+ 20'86	+ 15'31
Jute manufactures	+ 3'85	— 14'96	— 15'81	— 28'63	— 33'97	— 32'05

* This may not be the correct increase in price, as there was an alteration made this year in the kinds of glass entered under “Other Sorts.”

III.—Percentage Increase or Decrease in the Price of Various Articles Exported.—Contd.

A.—Percentage Increase or Decrease—Contd.

Articles.	1865 over 1861.	1873 over 1861.	1868 over 1861.	1875 over 1861.	1876 over 1861.	1877 over 1861.
Metals :						
Iron—						
Old	+ 10'10	+ 71'50	+ 2'59	+ 23'32	+ 10'10	+ 11'66
Pig and puddled	+ 12'83	+ 140'78	+ 10'55	+ 40'62	+ 20'67	+ 10'76
Bar, angle, &c.	+ 18'66	+ 79'56	+ 3'57	+ 35'39	+ 17'01	+ 6'58
Railroad	+ 6'23	+ 72'34	+ 3'77	+ 29'74	+ 15'84	+ 0'78
Wire (except telegraph)	+ 12'61	+ 34'86	+ 11'01	+ 5'96	— 6'02	— 15'59
Sheets and plates	+ 18'70*	+ 72'10*	+ 7'29*	+ 45'54*	+ 36'91*	+ 22'63*
Galvanised	+ 2'50*	+ 10'32*	— 11'67*	+ 0'12*	— 6'59*	— 16'62*
Hoops	+ 12'29	+ 60'04	— 2'41	+ 22'50	+ 5'16	— 6'15
Tinned plates	— 5'56	+ 31'08	— 5'32	+ 6'56	— 12'76	— 20'80
Cast or wrought	— 2'81	+ 23'99	— 10'72	+ 15'51	+ 5'68	— 8'62
Steel, unwrought	— 1'71	+ 11'34	— 3'45	+ 7'89	+ 2'25*	— 0'21
Manufactures of steel ...	+ 11'81*	+ 13'33*	— 8'57*	+ 22'32*	+ 19'98	+ 3'21*
Copper, unwrought—						
Ingots, cakes, &c.	— 10'28	— 5'65	— 17'94	— 11'29	— 16'73	— 23'79
Wrought or partly wrought—						
Yellow metal	— 5'53	— 1'15	— 20'74	— 9'91	— 14'06	— 18'43
Of other sorts	— 4'91	— 2'08	— 20'23	— 5'86	— 12'67	— 17'96
Brass of all sorts ...	— 6'58	+ 6'58	— 13'88	— 3'20	— 7'47	— 14'59
Lead, pig, sheet, and pipe ...	— 2'77	+ 9'70	— 6'84	+ 7'02	+ 4'16	— 0'74
Tin, unwrought	— 20'92	+ 12'52	— 22'73	— 24'71	— 34'76	— 39'37
Zinc, wrought and un- wrought	— 2'79	+ 14'15	— 0'18	+ 9'12	+ 5'41	— 5'18
Oil, seed	+ 7'34	+ 1'93	+ 8'11	— 17'76	— 19'31	— 8'11
Paper, other than hangings ...	— 19'44	— 23'23	— 25'51	— 25'25	— 25'00	— 29'04
Salt	— 9'88	+ 78'25	+ 15'67	+ 40'08	+ 17'28	+ 5'41
Silk manufactures — Broad piece goods	+ 21'97*	+ 12'74*	+ 23'89*	— 1'91*	+ 4'78*	+ 2'55*
Soap	+ 6'35	+ 7'04	+ 5'42	+ 0'12	— 0'53	— 1'05
Spirits, British	+ 3'80	+ 5'49	+ 4'64	+ 111'39	+ 104'64	+ 106'33
Sugar, refined	— 38'59	— 39'03	— 29'67	— 51'99	— 53'53	— 44'03
Wool, sheep and lambs	+ 36'83	+ 21'31	+ 6'36	+ 21'08	+ 6'13	+ 1'55
Woollen and worsted yarn ...	+ 33'79	+ 23'66	+ 15'43	+ 28'05	+ 14'04	+ 6'60
Woollen and worsted manu- factures—						
Cloths, &c.	+ 27'67	+ 38'84	+ 24'14	+ 32'37	+ 29'53	+ 20'96
Flannels, &c.	+ 5'85	— 2'00	— 1'62	—	— 5'14	— 4'82
Worsteds stuffs	+ 14'76	+ 1'00	+ 16'68	— 11'26	— 17'43	— 20'60
Carpets, &c.	+ 19'96	+ 28'76	+ 18'59	+ 23'29	— 15'79	+ 5'03

* Increase or decrease over the year 1862; the articles not being separately entered in 1861.

III.—Percentage Increase or Decrease in the Price of Various Articles Exported—Contd.

B.—Proportion of Increase or Decrease, calculated on Relative Proportions of each Article to the whole Exports of 1875.

Articles.	1865.	1873.	1868.	1875.	1876.	1877.
Alkali	+ 0'03	+ 0'45	+ 0'01	+ 0'08	— 0'04	— 0'09
Animals—horses	— 0'05	— 0'02	— 0'04	—	—	— 0'01
Arms, &c.—						
Fire arms	— 0'03	— 0'03	—	+ 0'08	— 0'05	— 0'11
Gunpowder	— 0'02	— 0'03	— 0'05	— 0'03	— 0'04	— 0'04
Bags, empty	+ 0'14	— 0'05	— 0'08	— 0'14	— 0'18	— 0'18
Beer and ale	— 0'01	+ 0'10	+ 0'01	+ 0'10	+ 0'06	+ 0'10
Books, printed	— 0'04	— 0'10	— 0'09	— 0'10	— 0'10	— 0'11
Butter	+ 0'01	+ 0'02	+ 0'01	+ 0'03	+ 0'03	+ 0'04
Candles, of all sorts	— 0'03	— 0'03	— 0'02	— 0'03	— 0'03	— 0'03
Carriages, railway	— 0'05	— 0'04	— 0'05	— 0'05	— 0'06	— 0'08
Cement	— 0'01	+ 0'04	— 0'02	—	— 0'01	— 0'01
Cheese	—	—	—	—	—	—
Coals, &c.	+ 0'23	+ 5'48	+ 0'34	+ 1'91	+ 0'81	+ 0'46
Cordage and twine.....	—	+ 0'02	+ 0'02	+ 0'01	+ 0'01	+ 0'01
Corn—						
Wheat.....	—	—	—	—	—	—
Wheat flour	—	—	—	—	—	—
Cotton yarn	+ 5'38	+ 2'46	+ 3'64	+ 1'00	+ 0'31	+ 0'15
Cotton manufactures—						
Piece goods, plain	+ 10'02	+ 2'12	+ 3'21	+ 0'54	— 0'94	— 0'94
„ printed	+ 3'68	+ 1'45	+ 1'56	+ 1'43	+ 0'80	+ 0'43
„ of mixed mate- rials.....	+ 0'05	+ 0'06	+ 0'05	+ 0'06	+ 0'05	+ 0'01
Fish—herrings	—	—	—	—	+ 0'09	+ 0'06
Glass—						
Plate	— 0'02	+ 0'01	— 0'02	—	— 0'02	— 0'02
Flint	+ 0'01	—	— 0'01	+ 0'01	+ 0'01	—
Common bottles.....	—	—	—	+ 0'02	+ 0'02	+ 0'02
Of other sorts	— 0'01	+ 0'02	— 0'01	+ 0'02	+ 0'02	+ 0'01
Hats of all sorts.....	+ 0'03	— 0'09	— 0'03	— 0'12	— 0'15	— 0'16
Leather tanned—Unwrought	+ 0'05	—	—	— 0'01	— 0'07	— 0'07
Wrought—						
Boots and shoes.....	— 0'06	— 0'08	— 0'09	— 0'07	— 0'09	— 0'11
Other sorts	— 0'04	— 0'03	— 0'01	— 0'01	+ 0'01	— 0'01
Linen and jute yarn—						
Linen yarn	+ 0'04	+ 0'04	+ 0'04	+ 0'03	+ 0'02	+ 0'03
Jute yarn	+ 0'04	+ 0'04	+ 0'03	+ 0'02	+ 0'01	+ 0'02
Linen and Jute Manufac- tures—						
White or plain	+ 0'33	+ 0'17	+ 0'12	+ 0'16	— 0'01	— 0'08
Printed, &c.	— 0'01	— 0'05	— 0'01	— 0'03	— 0'03	— 0'04
Sailcloth or sails	+ 0'01	+ 0'02	+ 0'01	+ 0'02	+ 0'02	+ 0'02
Jute manufactures.....	+ 0'02	— 0'09	— 0'09	— 0'17	— 0'20	— 0'19

III.—Percentage Increase or Decrease in the Price of Various Articles Exported—Contd.

B.—Proportion of Increase or Decrease, &c.—Contd.

Articles.	1865.	1873.	1868.	1875.	1876.	1877.
Metals :						
Iron—						
Old	—	—	—	—	—	—
Pig and puddled	+ 0'19	+ 2'11	+ 0'16	+ 0'61	+ 0'31	+ 0'16
Bar, angle, &c.	+ 0'22	+ 0'95	+ 0'04	+ 0'42	+ 0'20	+ 0'08
Railroad	+ 0'15	+ 1'74	+ 0'09	+ 0'71	+ 0'38	+ 0'02
Wire (except telegraph)....	+ 0'05	+ 0'14	+ 0'04	+ 0'02	— 0'02	— 0'06
Sheets and plates	+ 0'11	+ 0'43	+ 0'04	+ 0'27	+ 0'22	+ 0'14
Galvanised	+ 0'01	+ 0'05	— 0'06	—	— 0'03	— 0'08
Hoops	+ 0'04	+ 0'18	— 0'01	+ 0'07	+ 0'02	— 0'02
Tinned plates	— 0'09	+ 0'50	— 0'09	+ 0'10	— 0'20	— 0'33
Cast or wrought.....	— 0'05	+ 0'46	— 0'20	+ 0'29	+ 0'11	— 0'16
Steel, unwrought	— 0'01	+ 0'06	— 0'02	+ 0'04	+ 0'01	—
Manufactures of steel.....	+ 0'05	+ 0'05	— 0'03	+ 0'09	+ 0'08	+ 0'01
Copper, unwrought—						
Ingots, cakes, &c.	— 0'04	— 0'02	— 0'07	— 0'05	— 0'07	— 0'10
Wrought, or partly wrought—						
Yellow metal	— 0'03	— 0'01	— 0'10	— 0'05	— 0'07	— 0'09
Of other sorts.....	— 0'02	— 0'01	— 0'10	— 0'03	— 0'06	— 0'09
Brass, of all sorts	— 0'01	+ 0'01	— 0'03	— 0'01	— 0'01	— 0'03
Lead, pig, sheet, and pipe....	— 0'01	+ 0'04	— 0'03	+ 0'03	+ 0'02	—
Tin, unwrought	— 0'04	+ 0'03	— 0'05	— 0'05	— 0'07	— 0'08
Zinc, wrought and unwrought	—	+ 0'01	—	+ 0'01	+ 0'01	— 0'01
Oil, seed	+ 0'05	+ 0'01	+ 0'06	— 0'12	— 0'14	— 0'06
Paper, other than hanging	— 0'08	— 0'09	— 0'10	— 0'10	— 0'10	— 0'12
Salt	— 0'03	+ 0'23	+ 0'05	+ 0'12	+ 0'05	+ 0'02
Silk manufactures—Broad piece goods.....	+ 0'07	+ 0'04	+ 0'07	— 0'01	+ 0'01	+ 0'01
Soap	+ 0'01	+ 0'01	+ 0'01	—	—	—
Spirits, British	—	+ 0'01	—	+ 0'11	+ 0'10	+ 0'11
Sugar, refined.....	— 0'19	— 0'20	— 0'15	— 0'26	— 0'27	— 0'22
Wool, sheep and lambs.....	+ 0'15	+ 0'09	+ 0'03	+ 0'08	+ 0'02	+ 0'01
Woollen and worsted yarn	+ 0'78	+ 0'54	+ 0'35	+ 0'65	+ 0'32	+ 0'15
Woollen and worsted manufactures—						
Cloths, &c.	+ 0'86	+ 1'20	+ 0'75	+ 1'00	+ 0'92	+ 0'65
Flannels, &c.	+ 0'04	— 0'01	— 0'01	—	— 0'03	— 0'03
Worsteds stuffs	+ 0'74	+ 0'05	+ 0'83	— 0'56	— 0'87	— 1'03
rpets, &c.	+ 0'10	+ 0'14	+ 0'09	+ 0'12	+ 0'08	+ 0'03
	+ 22'71	+ 20'60	+ 9'99	+ 8'26	+ 1'17	— 2'04

IV.—Statement of the Quantity and Value of the Exports of the undermentioned Articles in 1873, with the Average Prices at which they were Exported ; of the Quantity of the same Articles Exported in 1877, and the Values they would exhibit at the Average Prices of 1873 ; and of the Actual Values declared in 1877.

[This table has already been printed in the Appendix to Mr. Giffen's paper. See above, p. 66.]

III.—*The Fires of London during the Year 1878, and the Metropolitan Fire Brigade.*

THE following particulars are taken from Captain Shaw's Annual Report for 1878, to the Metropolitan Board of Works, in continuation of similar notices for previous years :—

“The number of calls for fires, or supposed fires, received during the year has been 1,881. Of these 121 were false alarms, 101 proved to be only chimney alarms, and 1,659 were calls for fires, of which 170 resulted in serious damage, and 1,489 in slight damage.

“These figures refer only to the regular calls for fires, or supposed fires, involving the turning out of firemen, fire engines, fire escapes, horses, and coachmen; they do not include trifling damages by fires which were not sufficiently important to require the attendance of firemen; neither do they include the ordinary calls for chimneys on fire, which are separately accounted for further on.

“The fires of 1878, compared with those of 1877, show an increase of 126; and compared with the average of the last ten years, there is an increase of 26.

“The proportion of serious to slight losses—170 to 1,489—shows that our success in reducing losses during 1878 has been about the same as in the previous year.

“The following table gives it both in actual numbers and percentages :—

Year.	Number of Fires.			Percentage.		
	Serious.	Slight.	Total.	Serious.	Slight.	Total.
1866.....	326	1,012	1,338	25	75	100
'67.....	245	1,152	1,397	18	82	100
'68.....	235	1,433	1,668	14	86	100
'69.....	199	1,373	1,572	13	87	100
'70.....	276	1,670	1,946	14	86	100
'71.....	207	1,635	1,842	11	89	100
'72.....	120	1,374	1,494	8	92	100
'73.....	166	1,382	1,548	11	89	100
'74.....	154	1,419	1,573	10	90	100
'75.....	163	1,366	1,529	11	89	100
'76.....	166	1,466	1,632	11	89	100
'77.....	159	1,374	1,533	10	90	100
'78.....	170	1,489	1,659	10	90	100

“The number of fires in the metropolis in which life has been seriously endangered during the year 1878 has been 88; and the number of these in which life has been lost has been 22.

“The number of persons seriously endangered by fire has been 151, of whom 126 were saved, and 25 lost their lives. Of the 25 lost, 12 were taken out alive, but died afterwards in hospitals or elsewhere, and 13 were suffocated or burned to death.

“The number of calls for chimneys has been 3,763. Of these 1,223 proved to be false alarms, and 2,540 were for chimneys on

fire. In these cases there was no attendance of engines, but only of firemen with handpumps.

"The number of journeys made by the fire engines of the 50 land stations has been 16,329, and the total distance run has been 41,327 miles.

"The quantity of water used for extinguishing fires in the metropolis during the year has been 19,226,916 gallons—in round numbers a little more than 19 million gallons, or about 85,000 tons. Of this quantity, 36,704 tons, or about two-fifths of the whole, were taken from the river, canals, and docks, and the remainder from the street pipes.

"During the year there have been 8 cases of short supply of water, 30 of late attendance of turncocks, and 18 of no attendance, making altogether 56 cases in which the water arrangements were unsatisfactory.

"The strength of the brigade at present is as follows:—

50	fire engine stations.
109	„ escape „
4	floating „
56	telegraph lines.
104	miles of telegraph lines.
3	floating steam fire engines.
1	iron barge, to carry a land steam fire engine.
3	large land steam fire engines.
26	small „
12	seven-inch manual fire engines.
60	six-inch „
36	under six-inch „
17	hose carts.
125	fire escapes and long scaling ladders.
420	firemen, including the chief officer, the superintendents, and all ranks.

"The number of firemen employed on the several watches kept up throughout the metropolis is at present 91 by day and 168 by night, making a total of 259 in every twenty-four hours; the remaining men are available for general work at fires.

"Our list of wounds and other injuries for 1878 is, as usual, large; but, so long as the men work well, no diminution of accidents can be expected.

"There have been during the year 270 cases of ordinary illness, and 83 injuries, making a total of 353 cases, of which many were very serious, and 1 terminated in death."

From the tables appended to the report the following particulars are obtained:—

(a) The fires classified according to trades, arranged in the order of frequency of occurrence:—

	Number of Fires.
1. Private houses	358
2. Lodgings	203
3. Victuallers	60
4. Under repairs and building	36
5. Tailors, clothiers, and outfitters	30

Number of Fires—*Contd.*

6. Drapers	29
7. Grocers	28
8. Oil and colourmen	28
9. Cabinet makers	27
10. Coffee houses	25
11. Tobacconists	22
12. Boot and shoe makers.....	21
13. Stables	19
14. Printers.....	17
15. Booksellers, binders and stationers	15
16. Greengrocers and fruiterers	15
17. Refreshment rooms.....	15
18. Builders	14
19. Hotels and club houses	14
20. Warehouses	14
21. Beershop keepers	13
22. Butchers	12
23. Confectioners	12
24. Furniture makers and dealers	11
25. Upholsterers.....	11
26. Chandlers	10
27. Furriers and skimmers	10
28. Laundries	10
29. Unoccupied	10
<hr/>	
	1,089
Remainder, varying from 9 to 1	570
<hr/>	
Total.....	1,659
<hr/>	

(b) A list of the fires classified under the causes to which they have been assigned and arranged in the order of frequency of occurrence :—

Causes.	Number of Fires.
1. Unknown	350
2. Lamps (not gas) and lights	245
3. Gas	180
4. Sparks from fires, &c.....	151
5. Candles	144
6. Defective—flues, ovens, furnaces, boilers, stoves, &c.	115
7. Overheating of flues, ovens, furnaces, boilers, stoves, &c.	92
8. Foul flues	54
9. Children playing with fire and matches	49
10. Hot ashes	42
11. Airing and drying stoves	35
12. Smoking tobacco	31
13. Boiling over, &c., of oil, fat, pitch, &c.....	27
14. Lucifers.....	22
15. Improperly set ovens, furnaces, stoves, fireplaces, &c.	19
16. Spontaneous ignition	17
17. Vapour of spirits and oil	14

Number of Fires—*Contd.*

18. Lime slaking	10
19. Incendiarism	8
20. Burning rubbish	5
Miscellaneous and doubtful	49
Total.....	1,659

(c) The usual summaries attached to the report for 1878 further show: that of the months, the greatest number of fires occurred in January (176), and the smallest number in September (114); that of the days of the week the largest number of fires (271) occurred on Tuesday, and the smallest number (191) on Monday; and that of the hours of the day, the greatest number of fires occurred between the 7th and 12th hours P.M., and those most exempt from such disaster were the 5th to the 10th hours A.M.

With reference to the daily summary, the following table, which gives the totals of the fires for each day of the week for the last ten years, shows on the *average* that the largest number of fires occur on Saturday, and the smallest number on Monday. The annual average number of fires for the last ten years, is 1,633.

Years.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.
'69....	220	220	229	251	199	235	218	1,572
'70....	290	252	258	266	300	258	322	1,946
'71....	286	202	247	302	271	258	276	1,842
'72....	199	206	213	207	220	220	229	1,494
'73....	202	209	237	199	230	243	228	1,548
'74....	222	228	228	195	240	231	229	1,573
'75....	200	203	231	227	236	209	223	1,529
'76....	260	218	226	235	242	221	230	1,632
'77....	192	218	212	224	243	216	228	1,533
'78....	260	191	271	234	214	236	253	1,659
Total...	2,331	2,147	2,352	2,340	2,395	2,327	2,436	16,328

The condition of the brigade is reported to be in all respects satisfactory, and Captain Shaw in his report recommends five firemen for special merit in saving life from fire, who collectively saved 13 lives during the year.

IV.—*English Literature in 1878.*

IN continuation of a series of similar extracts for previous years, the following particulars are taken from the *Publishers' Circular* of 31st December, 1878:—

“Out of the total of 5,314 volumes issued in the past twelve months, 3,049, or three-fifths, were absolutely new books, and 2,046, or two-fifths, new editions and reprints. Classifying the figures, we find that out of the total of 5,314 works, Theology and Biblical literature, including Sermons, claim 739, nearly one-seventh; Educational, Classical, and Philological works, 586, more than one-tenth; Juvenile works and tales, 448, nearly one-twelfth; Novels, tales, and other fiction, 879, nearly one-sixth; Law books, 129, or one in every forty-one; Treatises on Political and Social Economy, Trade and Commerce, 181, nearly one-thirtieth; Artistic, Scientific, and illustrated works, 147, or one in every thirty-six; Voyages, Travels, and Geographical books, 215, nearly one in twenty-five; History, Biography, &c., 430, more than one-twelfth; Poetry and the Drama, 356, nearly one-fifteenth; Year-books and annual volumes of Serials, 240, or one in every twenty-two; works on Medicine, Surgery, &c., 233; also one in twenty-two; Belles Lettres, Essays, and Monographs, 531, one-tenth; and miscellaneous publications, 200, or one in twenty-six. The total for the year 1878 is 219 in excess of the number registered in 1877, and the increase lies chiefly in the Theological works, where the new books numbered 531 in 1878, as against 485 in 1877; in Educational works, which rose to 424 from 329 in 1877—an increase of nearly one hundred, probably due to the growing activity of School Boards and other scholastic agencies; in history and biography, which rose from 241 in 1877 to 312 in 1878; in year-books and annual volumes of serials, which stood at 225 last year, as compared with 70 in 1877—an increase probably more apparent than real; and in belles lettres, 409 as against 249. The number of new novels and works of fiction registered was almost stationary in the two years, being 447 in 1878 and 446 in 1877. The figures in the new book column of 1878 showed an increase on 1877 in every class except in works on art and science, where there was a slight falling off. In the issues of new editions the past year showed a decrease on every class except in novels and fiction, which rose from 408 in 1877 to 432 in 1878. In the total issues during the various months of the year, November takes the lead with 671 volumes, December follows with 590, October with 522; and the lowest point is reached in August, when the total, both of new books and new editions, was only 290; but this is the only month in which the figures are below 300.”

Analytical Table of Books Published in 1878.

Subjects.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total of Books on each Subject for the Year.
Theology, sermons, biblical, &c. }	*59 †19	36 7	28 30	43 14	34 18	51 13	34 16	29 9	28 7	44 26	85 19	60 30	531 208
													739
Educational, classi- cal, and philo- logical	*43 †21	49 12	36 14	26 8	41 7	33 14	38 9	24 9	43 14	28 24	37 13	26 17	424 162
													586
Juvenile works and tales	*21 † 4	9 6	3 4	9 6	4 6	7 5	14 3	5 0	25 12	81 28	82 25	59 30	319 129
													448
Novels, tales, and other fiction	*48 †27	25 24	42 50	30 45	47 49	39 31	34 43	23 31	31 30	29 29	65 43	34 30	447 432
													879
Law, jurisprudence, &c. }	* 9 † 3	4 2	16 5	6 5	4 4	7 1	8 2	12 2	2 1	8 3	9 4	8 4	93 36
													129
Political and social economy, trade and commerce }	*10 † 2	13 5	13 6	14 6	19 3	13 1	4 1	1 3	6 1	11 5	14 10	15 5	133 48
													181
Arts, science, and illustrated works }	*20 † 5	11 1	11 2	14 1	10 1	9 3	3 2	6 2	5 1	16 6	10 0	4 4	119 28
													147
Voyages, travels, and geographical research..... }	* 4 † 1	6 2	7 7	14 4	16 6	17 11	14 10	11 7	12 3	9 8	18 4	19 5	147 68
													215
History, biography, &c..... }	*18 † 7	23 11	26 9	21 12	39 12	21 7	21 7	16 8	10 8	33 15	46 11	38 11	312 118
													430
Poetry and the drama	*25 † 6	7 11	9 15	16 8	16 17	20 12	24 17	12 7	7 8	13 22	27 17	24 16	200 156
													356
Year books and serials in volumes }	*35 † 2	8 7	18 1	12 0	6 0	14 1	12 0	6 3	3 0	18 0	31 0	62 1	225 15
													240
Medicine, surgery, &c..... }	*10 † 6	13 4	12 6	15 7	14 6	17 3	18 6	11 2	10 1	13 8	27 3	16 5	176 57
													233
Belles lettres, essays, monographs, &c. }	*25 † 9	13 5	33 15	25 10	44 18	62 11	30 12	33 6	24 8	29 6	48 5	43 17	409 122
													531
Miscellaneous, in- cluding pamphlets, not sermons..... }	* 9 † 2	14 0	13 0	34 0	26 2	19 0	24 0	12 0	10 0	9 1	18 0	7 0	195 5
													200
	450	328	431	405	460	442	406	290	310	522	671	590	5,314

* New books.

† New editions.

The analytical table is divided into fourteen classes; also new books and new editions:—

Divisions.	1877.		1878.	
	New Books.	New Editions.	New Books.	New Editions.
Theology, sermons, biblical, &c.....	485	252	531	208
Educational, classical, and philological....	329	200	424	162
Juvenile works and tales.....	287	235	319	129
Novels, tales, and other fiction	446	408	447	432
Law, jurisprudence, &c.	63	55	93	36
Political and social economy, trade and } commerce	123	66	133	48
Arts, sciences, and illustrated works.....	125	64	119	28
Voyages, travels, geographical research ..	132	77	147	68
History, biography, &c.	241	132	312	118
Poetry and the drama.....	172	186	200	156
Year books and serials in volumes	70	144	225	15
Medicine, surgery, &c.	143	72	176	57
Belles lettres, essays, monographs, &c.	249	115	409	122
Miscellaneous, including pamphlets, } not sermons	184	40	195	5
	3,049	2,046	3,730	1,584
	5,095		5,314	

V.—University Boat Races and Sun-Spot Cycles.

WE receive the following from an able correspondent:—

In anticipation of the approaching University Boat Race, and in relation to sun-spot cycles, to which considerable attention has recently been drawn, it may be interesting to note the following coincidences between the winners of Oxford and Cambridge Boat Races in *minimum*, *intermediate*, and *maximum* sun-spot groups of years.

There have been in all *thirty-five* races rowed at various intervals from the year 1829 inclusive.

Oxford won, technically, *eighteen* races, but of these the race of 1849 was “foul,” and in 1859 the Cambridge boat “sank.”

Cambridge won *sixteen* races, and in 1877 there was a “dead heat,” consequently, deducting what may be called “flukes,” each university won *sixteen* races by hard rowing.

Of *twelve* races rowed in the *minimum* sun-spot group of years Oxford won *two-thirds* of the whole; of *nine* races rowed in the *maximum* sun-spot group of years Cambridge won *two-thirds* of the whole, while of *fourteen* races rowed in the *intermediate* sun-spot group of years each university won *exactly half*.

In the *minimum* sun-spot group of years Oxford won *five* races over Cambridge, and in the *maximum* sun-spot group of years—deducting the “foul” and the “sinking” already referred to—Cambridge won *five* races over Oxford.

These instances are not sufficiently numerous to justify definite deductions from results, but the coincidences are certainly remarkable, whether connected with solar, local, physical or other causes, while allowance must also be made for the moral effect upon the crew of each university of either previous victory or defeat.

The following table shows the distribution of results :—

Thirty-Five University Boat Races, with the Winners, compared with Sun-Spot Cycles.

Year.	Minimum Sun-Spot Group. 1st, 2nd, 10th, and 11th Years of Cycles.		Intermediate Sun-Spot Group. 3rd, 4th, 8th, and 9th Years of Cycles.		Maximum Sun-Spot Group. 5th, 6th, and 7th Years of Cycles.	
1829....	—	—	—	Oxford	—	—
'36....	—	—	Cambridge	—	—	—
'39....	—	—	—	—	Cambridge	—
'40....	—	—	Cambridge	—	—	—
'41....	—	—	—	—	—	—
'42....	—	Oxford	—	—	—	—
'45....	Cambridge	—	—	—	—	—
'46....	—	—	Cambridge	—	—	—
'49....	—	—	—	—	Cambridge	{ Oxford (foul)
'52....	—	—	—	Oxford	—	—
'54....	—	Oxford	—	—	—	—
'56....	Cambridge	—	—	—	—	—
'57....	—	—	—	Oxford	—	—
'58....	—	—	Cambridge	—	—	—
'59....	—	—	—	—	—	{ Oxford (Cambridge boat sank)
'60....	—	—	—	—	Cambridge	—
'61....	—	—	—	—	—	Oxford
'62....	—	—	—	Oxford	—	—
'63....	—	—	—	—	—	—
'64....	—	Oxford	—	—	—	—
'65....	—	—	—	—	—	—
'66....	—	—	—	—	—	—
'67....	—	—	—	—	—	—
'68....	—	—	—	Oxford	—	—
'69....	—	—	—	—	—	—
'70....	—	—	—	—	Cambridge	—
'71....	—	—	—	—	—	—
'72....	—	—	—	—	—	—
'73....	—	—	Cambridge	—	—	—
'74....	—	—	—	—	—	—
'75....	—	Oxford	—	—	—	—
'76....	Cambridge	—	—	—	—	—
'77....	Dead heat	—	—	—	—	—
'78....	—	Oxford	—	—	—	—
	3	8	7	7	6	3
	And one dead heat.					One foul and one boat sank.

VI.—*A Suggested Coincidence between the Death-Rate and the Motions of the Planet Jupiter.*

WE receive the following for publication, the suggestion contained in it being considered worth attention and further observation by good scientific authorities.

On a PROBABLE CONNECTION between the YEARLY DEATH-RATE and the POSITION of the PLANET JUPITER in his ORBIT, by B. G. JENKINS, F.R.A.S.

On representing by a diagram the deaths in England for the last thirty-nine years (the relative numbers per 1,000 for males and for females having been kindly furnished me by the Registrar-General), I was not a little surprised to find that what I had suspected was true, namely, that there was a marked difference in the number of deaths every six years, in the majority of cases a low death-rate being succeeded by a very high one.

Having long believed the truth of the theory, first propounded, I believe, by Messrs. De la Rue, Balfour Stewart, and Loewy, that the planets, and especially Jupiter, have a marked influence on the sun spots, and having myself about a year ago shown in *Nature* that the average sun-spot, magnetic, and auroral periods are of the same length as Jupiter's anomalistic year, I mapped out the curve for Jupiter's course for the last thirty-nine years, and was rewarded by finding that the perihelion and aphelion of Jupiter corresponded in a very remarkable manner with the periods of low death-rate.

Jupiter was in aphelion in March, 1839; the death-rate was the lowest of the period, 43·8 in 2,000, and as high as 45·7 the next year.

In February, 1845, the planet was in perihelion, and the death-rate the lowest, 41·8; two years after it was 49·2.

In January, 1851, the planet was in aphelion, and the death-rate of the year just completed the lowest, 41·5, from which time it rose rapidly.

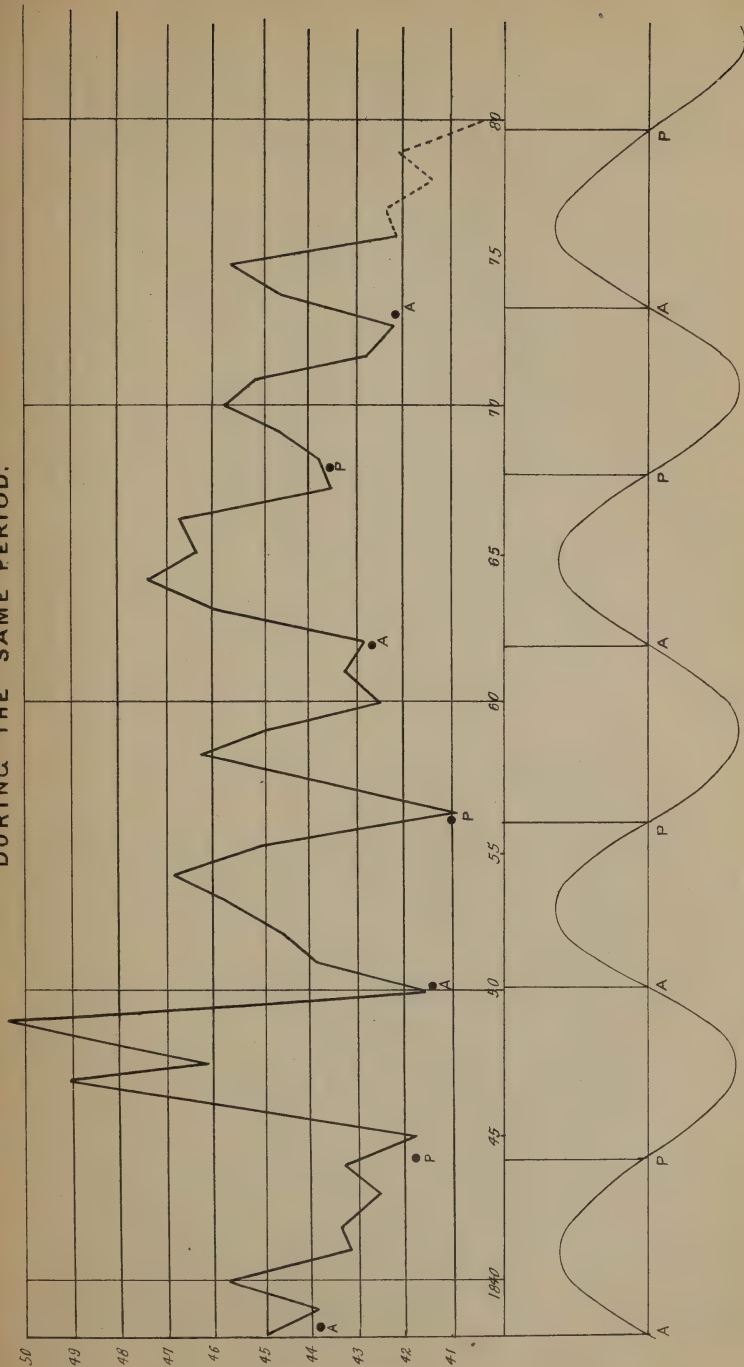
In December, 1856, the planet was in perihelion, in which year the lowest death-rate again occurs, viz., 41·1, being rapidly followed by a high rate of 46·2.

In December, 1862, the planet was in aphelion, and the death-rate was at very nearly its lowest for the period, and was rapidly followed by as high a rate as 46·0 the next year.

In November, 1868, the planet was in perihelion, the death-rate then being very nearly as low as that of the previous year, which was the lowest of the period, followed by a rate of 45·8 within two years.

In October, 1874, the planet was in aphelion, the death-rate of the year before being the lowest for the period, rapidly followed in 1875 by a rate of 45·7, the highest of the period.

Although I am not in possession of the numbers for 1877 and 1878, I believe I can detect a repetition of the gradual downward curve of 1840, only on a larger scale, which will result in a death-



A.. Is aphelion of Jupiter.

P. Is perihelion of ———.

The number of the year, as '45, is placed at the end of the space which represents the year.

rate of about 40 in 2,000 in the year 1880, a lower rate than has probably occurred in the history of this country.

On the other hand, the evidence seems to point to a very rapid and persistently high death-rate commencing in 1882. This evidence, affording a satisfactory explanation of the phenomena, is such as I presume cannot be dealt with by a statistical society.

Annual Rate of Mortality per 2,000 of Males and Females from the Year 1838. (England.)

	Per 2,000.		Per 2,000.		Per 2,000
1838	44·9	1853	45·8	1867	43·5
'39	43·8	'54	47·1	'68	43·8
'40	45·7	'55	45·2	'69	44·6
'41	43·2	'56	41·1	'70	45·8
'42	43·4	'57	43·7	'71	45·2
'43	42·5	'58	46·2	'72	42·7
'44	43·2	'59	44·9	'73	42·2
'45	41·8	'60	42·5	'74	44·6
'46	46·1	'61	43·3	'75	45·7
'47	49·2	'62	42·9	'76	42·2
'48	46·1	'63	46·0	'77	42·5 ?
'49	50·3	'64	47·5	'78	41·3 ?
'50	41·5	'65	46·5	'79	42·2 ?
'51	44·0	'66	46·8	'80	40·4 ?
'52	44·8				

VII.—*Notes on Economical and Statistical Works.*

DENMARK has, for a certain number of years past, been distinguished for the statistical works issued from the Government Bureau of Statistics. Herr V. Falbe Hansen, formerly the director of that bureau, has lately been transferred to the chair of Political Economy in the University of Copenhagen, the previous distinguished occupant of that chair, Professor Frederiksen, having removed to the wider sphere of the United States. Herr Falbe Hansen has usefully employed the comparative leisure of the University in carrying towards completion the work upon *Denmark's Statistik* (Forlags bureauet i Copenhagen, G. E. C. Gad, O. H. Delbanco, &c.), which he had undertaken in conjunction with Professor Will. Scharling. Curiously enough, the volume which has now just appeared is the third; it is to be followed by the fourth; and the first and second volumes are to be published later on. The third volume, which is before us, contains a complete account of the means of conveyance in Denmark. Professor Scharling describes the harbours, canals, highways, and railways of the kingdom, together with the State post office and telegraph departments. The Danish post office is distinguished from ours by possessing a department devoted to the forwarding of parcels (Pakke post), and it is interesting to observe (p. 209) the rapid increase

which has been going on in this branch of traffic : thus the numbers of parcels have been as follows :—

1860-61	407,000
'65-66	530,000
'70-71	783,000
'75-76	1,258,000

Multiplied three times in fifteen years ! Scharling also describes fully the Danish system of weights and measures, the money and minting operations, the banking system of the kingdom, &c. The second part of the volume contains a financial and fiscal history of Denmark since 1651, written by Hansen. The work is illustrated by several beautifully executed statistical maps, showing the trade with the different ports of the world by coloured circles of proportionate size. The most remarkable map, however, is one which shows, in addition to the inward and outward tonnage of the Danish ports, the passenger and goods traffic along every section of the railways. These latter numbers are graphically indicated by the breadth of the coloured shading at either side of the line, the exact numbers being engraved on the margin of the shading. It is curious to observe how the traffic thins out in receding from Copenhagen and Aarhus. This map is well worthy of notice and imitation.

Undeterred by the mathematical criticism of Herr Westergaard, Herr C. L. Madsen has continued his ingenious researches into the mathematical laws manifested in the traffic of Denmark, Sweden, and Norway with the rest of the world. The result is an elaborate memoir (*Danmark's, Sveriges, og Norges Samkvem med Udlandet, 1871-77. Nye Undersøgelser om Løven for den Internationale Trafik, Copenhagen, G. E. C. Gad, 1879*). Madsen shames our English statist by the profoundness and thoroughness of his attempt to reach the mathematical principles of the subject. His results concerning international telegraph traffic have now been printed in English in the *Journal of the Society of Telegraph Engineers* for 1878.

The seventh report of the Postmaster-General of Japan, for the eleventh year of Meiji (1878) is a very interesting document, and shows that the Japanese post office, although only seven years old, has all the vigour of the older establishments on which it is moulded. The revenue last year exceeded the estimate by 63,778 *yen* or dollars, while the expenditure was 15,505 dollars *less* than was expected. We learn that the letters delivered numbered 24,983,419; the postal cards, 10,036,960; the newspapers, 9,616,098; books, samples, &c., 400,278. There were only 9,328 dead letters, which would seem to show that the Japanese characters are well fitted for precise addresses. Our faith in the statistics is, indeed, a little shaken on observing that of nearly ten million newspapers, only *one* is recorded as stolen, in addition to eight destroyed by fire and shipwreck. We commend this truly singular fact not only to our own post office authorities (who though careful enough with letters, think little of newspapers), but to the post

masters of the United States, who are generally believed to supply themselves freely out of the newspaper mail bags. The number of Japanese post offices is now 3,792, in addition to 1,246 street letter boxes, and 1,263 stamp agencies. The number of postal money orders issued has decreased by 43,128 orders, or 21 per cent., the total number last year being 204,367. This decrease is attributed to the recent establishment of a large number of national banks which are naturally employed for the transmission of the larger sums of money. Ten years ago there were no means of transmission whatever. The Japanese seem not to be prompt in presenting the money orders, since 10,318 orders, or nearly one in 20 of those issued during the year, remained unpaid at the close of the year. The average amount of each order was 13.65 *yen* or dollars (4s. each) or 2*l.* 15s. The post office savings bank department is in a highly flourishing condition, the number of banks having been increased during 1878 from 161 to 292. The number of deposits had increased by 88 per cent., and the amounts of deposits by 270 per cent.! Truly the Japanese have embarked boldly in the great race of civilisation.

Among the currency publications of the last few months we may mention "*Il Nuovo Patto della Unione Monetaria Latina. Studio di S. Cognetti de Martiis.*" The author gives the text and discusses favourably the new agreement of the Latin Monetary Union, especially as regards the eighth article, which provides for the withdrawal of the small note currency of Italy and the return to Italy of the silver money which had wandered into the other States.

We are glad to have a report upon the late Monetary Conference held in Paris, in August, 1878, by that sound and accomplished economist, M. Feer-Herzog, who, with M. Lardy, represented Switzerland. The silver party in the States, prompted by M. Cernuschi, challenged the opinion of Europe about the double standard, and they have had a crushing response. As M. Feer-Herzog remarks (p. 64), "The States of Europe, however great may otherwise be the diversity of their monetary conditions, have found themselves in agreement—Italy alone excepted—to decline the proposals of the United States." It is now clear, however, that the proposals emanated only from a small active party in the States, which party has since been entirely frustrated in their views both by the President and by the force of opinion of the mercantile classes. M. Feer-Herzog's opinions are quite in accord with those of the conference—in favour of leaving to silver the position which it now holds as the currency of by far the largest masses of population in the world. It is probable that his opinions had much influence, together with those of Mr. Goschen, in shaping the satisfactory resolutions of the conference.

Among the French currency publications called forth by the conference, is that of M. Th. Mannequin, "*Le Problème Monétaire et la Distribution de la Richesse*" (Guillaumin, 1879). He proposes a gold unit of value, the *franc* of 5 grammes, with subsidiary silver and bronze coins, the right of coinage to be open to the whole world, on condition of paying the profits of coinage into a

Caisse du Monnayage, the funds of which are to be retained for the purpose of withdrawing the worn or superfluous coin from circulation. The theory of the system is not bad, but it is difficult to see how it can be carried into effect.

The first number has just appeared of Dr. A. Hildebrandt's "Science Index," for January, 1879. This publication forms a monthly guide to the contents of the scientific periodicals, and seems likely to be as indispensable to statisticians as to other classes of what the Americans call "scientists." The monthly index fills nearly sixty-four quarto double-column pages, and seems to be very complete. Thus, under the single heading "Commerce" we have nearly four columns of references to the discussions in the journals during January, 1879. Capital and Labour, Economy, Statistics, Trades Unions, Strikes, Lockouts, Labour, and many other headings furnish abundant statistical references. Further notice of this remarkable Index may be deferred until more numbers have appeared.

VIII.—Notes on Additions to the Library.

THE additions to the library during the last quarter, if not more numerous, are quite up to the average in interest and value. The present list includes some useful statistical annuals, three of the most important of which relating to this country, are published by Messrs. Waterlow and Sons.

(1) *The Municipal Corporations Companion, Diary, Directory, and Year Book of Statistics for 1879*, is an 8vo. volume of upwards of 500 pages (without the diary), and has been corrected up to a late date. It is in its third year of publication, and is ably edited by a Fellow of this Society, Mr. J. R. Somers Vine. It is in some respects a continuation of the *Municipal Corporations Directory*, published in 1866, by Mr. J. W. Vickers. The editor has in the volume under notice redeemed a promise made last year, by including within the scope of the work, a description of those municipalities and boroughs not subject to the Act 5 and 6 William IV, cap. 76, and its supplementary statutes. The list comprises each and every authority now being inquired into by the Royal Commission on Unreformed Municipal Corporations. Other new features in the present issue are a tabular index to the cities and boroughs, a table of the Municipal Corporations Acts, and information relating to recently incorporated districts.

(2) *The County Companion, Diary, Statistical Chronicle, and Magisterial and Official Directory for 1879*. Compiled and edited also by Mr. Vine, is a new publication. It is an 8vo. volume of 600 pages (without the diary), and contains for each county, in a condensed and systematic form, a topographical, geological, historical, and general description, as well as agricultural, electoral, financial and general, police and criminal statistics, and a large amount of other information. This combined with the *Municipal Directory*, it is claimed, form the most complete authority upon

county and borough administration extant, and contains the names and addresses of the whole of the magistrates of England and Wales. The object, it is stated, of this work, is to establish a reliable annual authority upon all matters that are generally requisite to be known respecting "County Administration."

(3) *The Banking Almanac, Directory, Year Book, and Diary for 1879*, is a statistical work of long standing and high merit as a useful and trustworthy guide, now in its thirty-fifth year of publication. It is edited by Mr. R. H. I. Palgrave, F.S.S., a well known authority and writer on banking matters, and his introductory remarks and review of the past year will no doubt be read with keener interest than usual in consequence of the vicissitudes experienced among banks and bankers during the period referred to.

Mr. Hayter's *Victorian Year Book for 1877-78* is assuming a more cosmopolitan character. This is the fifth year of issue, and is distinguished from its predecessors by containing statistical data, relating not only to Victoria and the other Australasian colonies, but also to other British dominions and foreign countries throughout the world. This publication has been referred to on a previous occasion as a model of its kind. The present issue more than fully sustains its previous reputation.

Additions to the Library during the Quarter ended 31st March, 1879.

Donations.	By whom Presented.
Austria and Hungary—	
Statistisches Jahrbuch für das Jahr 1876, Hefte 6 und 8. 8vo. Wien, 1878-79	{ The Imperial Central - Statistical Commission
Statistisches Jahrbuch des k. k. ackerbau-Ministeriums für 1877, 3 ^{es} Heft, 2 ^e Lief. 8vo. Wien, 1878	
Hivatalos Statistikai Közlemények Magyarország hite- litézetei, 1876-ban. 191 pp., 4to. Budapest, 1878	{ Royal Statistical Bureau, Hungary
Statistisches Jahrbuch für Ungarn, 6 ^{er} Jahrgang 1876, Hefte 2, 4, 5, 7—11. 4to. Budapest, 1878	
Statistisches Handbüchlein der kgl. Hauptstadt Prag für das Jahr 1877. 141 pp., 8vo. Prag, 1878. [Another copy in the Bohemian language.].....	{ The Statistical Commission of the City of Prague
Denmark—	
<i>Statistisk Tabelværk, 4^e Række—</i>	
Litra G. N ^r 1. Kreaturholdet den 17 ^{de} Juli, 1876 (Live Stock Census). xxi and 136 pp., 4to. Kjöben- havn, 1878.....	{ Statistical Bureau of Denmark
France—	
Tableau Général du Commerce de la France avec ses Colonies et les puissances étrangères pendant l'année 1877. lxxi and 737 pp., folio. Paris, 1878.....	{ Minister of Agriculture and Commerce
Ministère des Finances. Bulletin de Statistique et de legislation comparée—	
1 ^{ere} année, Jan.—Dec., 1877	{ M. A. de Foville
2 ^{eme} „ Jan.—Dec., 1878	
3 ^{eme} „ Jan. et Feb., 1879. 8vo. Paris	

Donations—Contd.

Donations.	By whom Presented.
France—Contd.	
Compte Général de l'Administration de la Justice Civile et Commerciale en France pendant l'année 1876. xxix and 197 pp., 4to. Paris, 1878.....	The Minister of Justice
Compte Général de l'Administration de la Justice Criminelle en France pendant l'année 1876. xliii and 231 pp., 4to. Paris, 1878	
Révues Bibliographiques Universelles—	
Partie Littéraire. Tome xxv, Nos. 1—3.....	The Editor
„ Technique. Tome xxvii, Nos. 1—3. 8vo. Paris, 1879.	
Révue Géographique Internationale—	
2 ^{ème} année, Nos. 24 et 25.	„
3 ^{ème} „ Nos. 27—35. 4to. Paris. 1877-78	
Société de Statistique de Paris, Journal de la. xx ^{ème} année. Nos. 2 et 3, imp. 8vo. Paris, 1879 ...	The Society
Germany—	
Berlin. Die Berliner Volkszählung von 1875. 2 ^{es} Heft. 4to. Berlin, 1878	Statistical Bureau of Berlin
Monatshefte zur Statistik des Deutschen Reichs. Band xxx, Heft 12 (Dec., 1878). 4to. Berlin	The Imperial Statistical Office
Italy—	
Annali di Statistica, 1878. Serie 2 ^a , vol. i—iii, diagrams, 8vo. Roma	Directorate General of Statistics
Atti Parlamentari, Sessione del 1878. Camera dei Deputati. No. 14. Relazione sull' andamento del consorzio e dei sei istituti di Emissione che lo compongono durante l'anno 1877. 108 pp., 4to.	
Bollettino Settimanale dei Prezzi di Alcuni dei principali Prodotti Agrari. Anno 1878. Nos. 47 e 48, e 50—52; e anno 1879. Nos. 1—6, imp. 8vo. Roma	„
Bollettino mensile delle Situazioni dei Conti degli Istituti d'Emissione. Anno IX, Nos. 11 e 12, imp. 8vo. Roma	„
Bollettino Bimestrale delle Situazioni dei Conti. Anno IX, No. 5, imp. 8vo. Roma	„
Bollettino di Notizie Commerciali, 1878. Nos. 11—14. imp. 8vo. Roma	„
Carte e Diagrammi di Demografia Italiana—	
Tavole 1—4, Statura dei Coscritti.....	„
„ 5—7, Popolazione classificata per sesso e per età	
„ 8—10. Mortalità per sesso e per età	
Carte 1, Italia Settentrionale e Isola di Sardegna ...	„
„ 2, Italia Centrale	
„ 3, Province Napoletane	
„ 4, Sicilia	
Esposizione Universale del 1878 in Parigi. Sezione Italiana, Elenco dei Giurati e dei Premiate. 96 pp. 8vo. Roma, 1878	„
Società Italiana d'Igiene, Giornale della, anno 1 ^o , N° 1 (Gen. Feb. 1879). 148 pp. Diagrams. 8vo. Milano	„

Donations—Contd.

Donations.	By whom Presented.
Italy—Contd.	
Bollettino Consolare. Vol. xiv, fasc. 11 e 12. 8vo. Roma	Sig. Luigi Bodio The Editor
Rivista Europea, Rivista Internazionale. Vol. xi, fasc. 1—4, e vol. xii, fasc. 1 e 2. Imp. 8vo. Firenze	
Japan—	
Imperial Meteorological Observatory, Tokei, Reports, 1875-77. 3 sheets	The Statistical Bureau at Tokio
Reports on Penal Servitude, 1876-77	
„ Foreign Trade, 1877. 8vo..... [In Japanese.]	
Norway—	
<i>Norges Officielle Statistik—</i>	
A. No. 2. Fattigstatistik for 1875. (L'Assistance publique.)	The Central Statisti- cal Bureau of Nor- way
C. „ 1. Resultaterne af Folketællingen i Norge i Januar 1876, 1 ^{te} Hefte. (Recense- ment.) 4to. Kristiania	
C. „ 4. Beretning om Sundhedstilstanden og Medicinalforholdene i aaret 1876. (l'état sanitaire et médical).....	
F. „ 2. Statistiske opgaver vedkommende det Norske Postvæsen for aaret 1877. (Statistique Postale.) Royal 4to. Christiania, 1878	
Sweden—	
<i>Sveriges Officielle Statistik:—</i>	
A. Befolknings-statistik, Ny följd xix, for år 1877 (Population).....	Central Statistical Bureau of Sweden
B. Rättsväsendet, Ny följd xix, 1, 2, for år 1876 (Justice Civile et Criminelle)	
C. Bergshandteringen for år 1877 (Mines et Usines)	
D. Fabriker och Manufakturer for år 1877 (Industrie)	
E. Inrikes sjöfart och handel for år 1877 (Com- merce et Navigation Intérieur)	
F. Utrikes Handel och Sjöfart for år 1877 (Com- merce et Navigation Extérieur).....	
G. Fångvården, Ny följd xix for år 1877 (Prisons)....	
H. Kungl Maj:ts Befallningshafvandes Femårs- berättelser, Ny följd iv jemte Sammandrag för åren 1871-75 (Rapports des Préfets). 4to. Stockholm 1878-79	
L. Statens Jernvägstrafik 16 for år 1877 (Chemins de fer)	
N. Jordbruk och Boskapsskötsel for år 1878 (Årgång 5) (Statistique Agricole)	
S. Allmänna Arbeten 6 for året 1877. 4to. Stock- holm, 1878	
Statistisk Tidskrift—	
1877, H. 49, No. 2, H. 50, No. 3	„
1878, H. 51, No. 1, H. 52, No. 2, H. 54 Supplement. 8vo. Stockholm	

Donations—Contd.

Donations.	By whom Presented.
Sweden—Contd.	
Sammandrag af de solidariska enskilda bankernas samt aktie-bankernas och kreditaktiebolagens uppgifter, 31 Juli, 1877,—31 Dec., 1878. 4to. Stockholm, 1878-79	Central Statistical Bureau of Sweden
General Sammandrag öfver 1876 och 1877, års Bevil- ling. 4to. Stockholm, 1878	"
Kapital-Konto till Riks-Hufvud-Boken for år 1876. 86 pp., 4to. Stockholm, 1878	"
Uppgifter om Hypoteksinrättningarne for år 1877. 4to. Stockholm, 1878	"
Öfversigt af Sveriges Riksbanks Ställning samman- fattad efter 1877 års Bokslut. 22 pp., 4to. Stock- holm, 1878	"
Sammandrag af Riksbankens Ställning, Sept. and Dec., 1877, and Jan.—Dec., 1878. 4to. Stockholm, 1878	"
Uppgift öfver Riksbankens Metalliska Kassa, Aug.— Dec., 1877, and Jan. and Feb., 1878. 4to. Stockholm	"
Riks-Stat for år 1879. 37 pp., post 4to. Stockholm, 1878	"
<i>Exposition Universelle de 1878 à Paris—Royaume de Suède—</i>	
I. Exposé Statistique par le Dr. Elis Sidenblad. 554 pp., map, 8vo. Stockholm, 1878.....	"
II. Catalogue, rédigé par Hj: Af. Petersens. 207 pp., 8vo. Stockholm, 1878	"
Portugal—	
<i>Société de Géographie de Lisbonne—</i>	
L'Enseignement Commercial en Portugal (traduc- tion). 21 pp., 8vo. Lisbonne, 1878.	The Society
L'Industrie Minière au Portugal. Renseignement statistiques par O. Guedes, avec 6 Tableaux. 6 pp., 8vo. Lisbonne, 1878	"
Spain—	
Boletim de la Sociedad Geografica de Madrid. Tomo 4, No. 6; Tomo 5, Nos. 3—6. 8vo. Madrid	"
Los Restos de Colon, Informe de la Real Academia de la Historia al Gobierno de S. M. Sobre el supuesto hallazgo de, en la Iglesia Catedral de Santo Domingo. 197 pp., 12mo. Madrid, 1879	The Count of Torenos
Roumania—	
<i>Statistica din Romania—</i>	
Statistica Agricola pe anul 1875-76	Central Statistical Office
Statistica invetiamentului pe anu Scolar 1876-77 (Instruction)	"
Statistica Judiciara pe anul 1874	"
Miscarea Populatiunii pe anul 1875 după Registrele Starii civile. (Mouvement de la population.) 4to. Bucuresci, 1878	"
Russia. Règlement Définitif du Budget de L'Empire pour l'exercice, 1877. 45 pp., 8vo. St. Péters- bourg, 1878	M. A. Vesselovsky.

Donations—Contd.

Donations.	By whom Presented.
United States—	
Agriculture, Annual Report of the Commissioner of the Department of, for the year 1876. 447 pp., cloth, maps, plates, &c., 8vo. Washington, 1877	Hon. W. G. Le Duc.
Bureau of Statistics, Quarterly Reports of the Chief of the, 1st July, 1877, to 30th June, 1878. (2 copies.) 493 pp., half-leather. 8vo. Washington, 1878.....	Joseph Nimmo, Esq. Junior, Chief of the Bureau
Imported commodities entered for consumption in the United States, with rates of duty and amount of duties collected, year ended June 30th, 1878. 8vo. Washington, 1878	"
Comptroller of the Currency, Annual Report of the, for 1878. (Bound and unbound copies.) 8vo. Washington	J. J. Knox, Esq.
MICHIGAN, State of, Sixth Annual Report of the Secretary of the State Board of Health of the, year ending 30th September, 1878. lxxix and 355 pp., maps and diagrams, 8vo. Lansing, 1878	H. B. Baker, Esq., M.D.
MICHIGAN, Diphtheria, Restriction and Prevention of, Document issued by the State Board of Health of. 8 pp., 8vo.	"
The Michigan Homestead, a Gazette for the Farm and Fireside, with wheat map for 1876-77. Vol. i, No. 1. Sheet folio. Detroit, Michigan, 1878	"
Providence, City of (Rhode Island), Statement of, the Mortality in, during the year 1878 and the three years preceding. 1 column slip. Providence, 1879	Dr. E. M. Snow, City Registrar, &c.
RHODE ISLAND (State of), Twenty-fifth Report upon the Births, Marriages, and Deaths in the, year ending 31st December, 1877. 116 pp. 8vo. Providence, 1878	"
American Statistical Review, The, by Charles S. Hill, Vol. i, part 1, Jan., 1879. 120 pp., 8vo. New York	The Editor
Astor Library, New York, Annual Reports of the Trustees of the; boards; Nos. 1—28, 1849-77. 8vo. New York.....	The Trustees of the Astor Library
Banker's Magazine, New York, vol. xiii, Nos. 7—9, 8vo	The Editor
Franklin Institute, Philadelphia, Journal of the. Vol. lxxvii, Nos. 1—3, 8vo.	The Institute
India, Colonial, and other Possessions.	
India—	
Statement exhibiting the Moral and Material Progress and Condition of, during the year 1876-77. No. 364. 112 pp., folio	C. C. Prinsep, Esq.
Vital Statistics of, by Dr. Bryden—	
Vol. iv. Annual Returns from 1871-76, British Army of India, Native Army and Jails of Bengal. folio. Calcutta, 1878	The Secretary of State for India in Council
Vol. v. Reports of 1876 on Armies and Jails and on Epidemic Cholera. 331 pp., folio. Calcutta, 1878	

Donations—Contd.

Donations.	By whom Presented.
Bengal—	
Report on the Administration of, 1877-78. Roy. 8vo. Calcutta, 1878	The Government of Bengal
Public Instruction in, General Report on, for 1877-78. 106 and 14 pp., folio. Calcutta, 1878	
<i>Asiatic Society of—</i>	
Journal of the. Vol. xlvii, Part 1, Nos. 2 and 3, and Part 2, No. 3 (1878). Plates, &c.....	The Society
Proceedings of the, Nos. 7 and 8 (July—August, 1878). 8vo. Calcutta	
Madras. Fourteenth Annual Report of the Sanitary Commissioner for, 1877. With Appendices. 230 and lxxxix pp., maps and diagrams, folio. Madras, 1878	Surgeon - Major W. R. Cornish, F.R.C.S., &c.
Mauritius. Almanac and Colonial Register for 1879. Edited by J. B. Kyshe, F.S.S. viii and 344 pp., 8vo. Mauritius	The Editor
Nova Scotia. Various statements connected with the Trade and Commerce of the Province of, for year ended 30th September, 1866. 484 pp., folio. Halifax, N.S.	Professor W. S. Jevons, F.R.S.
New South Wales—	
Financial Statement of the Hon. H. E. Cohen, made 6th November, 1878. Folio	Agent-General for New South Wales
Statistical Register of, for the year 1877. 307 pp., folio. Sydney, 1878	
Another copy of the above.....	The Registrar-General
Railways of, Report on their construction and working during 1876. By John Rae, A.M., Commissioner for Railways. 106 pp., map and diagrams, folio. Sydney, 1877	A. Liversidge, Esq., Sydney
Sydney City and Suburban Water Supply, 1st and 2nd Reports to the Sewage and Health Board upon the. By A. Liversidge, F.C.S., &c., 1875	"
Sydney City and Suburban Sewage and Health Board, Progress Reports of the, Nos. 1—12. 1875-77. Plans, &c., folio. Sydney	
Queensland—	
Queensland Gazette, Supplement, containing "Vital Statistics," in monthly numbers. Folio. Brisbane	H. Jordan, Esq., Registrar-General
Statistics of the Colony of, for the year 1877. Folio. Brisbane, 1878	
Vital Statistics, 1877. 18th Annual Report from the Registrar-General. xxxvii and 40 pp., folio. Brisbane, 1878.....	"
South Australia. Boothby (J.), The Adelaide Almanac and Directory for South Australia, 1879. 427 pp., cloth, 8vo. Adelaide	The Editor

Donations—Contd.

Donations.	By whom Presented.
Victoria—	
Victorian Yearbook for 1877-78. By H. H. Hayter } (6 copies). 350 pp., 8vo. Melbourne and London }	H. H. Hayter, Esq., Government Statist
Australasian Statistics for the year 1877. (5 copies.) } 13 pp., folio. Melbourne, 1878..... }	"
Melbourne International Exhibition, 1880. List of } Commissioners, Committees, Regulations, &c., with } Appendix. System of general classification. 19 pp., } folio. Melbourne	"
<hr/>	
England and Wales—	
Friendly Societies, Industrial and Provident Societies } and Trades Unions—	The Chief Registrar of Friendly So- cieties
1876, Reports. Part II (A), Appendix (P). }	
Friendly Societies. 429—I	The Registrar-Gen- eral of England
1877. Reports. Part I. No. 388. Folio.....	
Quarterly Return of Marriages in, to September, and } of Births and Deaths in, to December, 1878. No. 120. } 8vo. London	
Ireland—	
Weekly Returns of Births and Deaths of eight large } towns, current numbers, with an Annual Summary. }	The Registrar-Gen- eral of Ireland
Quarterly Returns of Marriages in, to September, 1878, } and of Births and Deaths in, to December, 1878. }	"
No. 60. 8vo. Dublin	
Scotland—	
Weekly and Monthly Returns of Births, Deaths, and } Marriages in the eight principal towns of, current } numbers	The Registrar-Gen- eral of Scotland
Quarterly Return of the Births, Deaths, and Marriages } in, quarter ending 31st December, 1878. No. 96. }	"
(4 copies.) 51 pp., 8vo. Edinburgh	
United Kingdom—	
Army Medical Department, Report for the year 1877. } Vol. xix [C-2169.] 254 pp., photographs, &c., 8vo. }	The Army Medical Department
1879	The Board of Trade
British and Irish Produce. Report to the Secretary of } the Board of Trade on the Prices of Exports of, in } the years 1861-77. [C-2247]. Folio	
Emigration and Immigration from and into the United } Kingdom, copy of Statistical Tables relating to, in } the year 1878. No. 32. Folio..... }	"
Foreign Countries, Statistical Tables relating to. } Part xii. [C-222.] 411 pp. Folio	"
Principal and other Foreign Countries, Statistical } Abstract for the, in each year from 1860-73. 2nd } number. [C-1372], and from 1865-76-7. 5th } number. [C-2126.] 180 pp. 8vo. }	"
Trade and Navigation, Monthly Returns of. Current } numbers	"

Donations—Contd.

Donations.	By whom Presented.
United Kingdom—Contd.	
Annual Statement of the Navigation and Shipping of the, for the year 1878. [C-2254.] Folio	The Board of Trade
Statistical Abstract for the, in each of the last fifteen years, from 1862-76, 24th number. [C-1790.] 133 pp., 8vo.....	
Local Government Board, Supplement to the Seventh Annual Report of the, 1877-78, containing the Report of the Medical Officer for 1877. [C-2130-31.] 379 pp., diagrams, plates, &c., 8vo.	The Local Govern- Board.
Poor Laws of certain of the United States, &c., by J. J. Henley, Esq. [C-1868.] 91 pp., 8vo. 1876	"
Poor Laws in Foreign Countries. Report by W. J. Sendall, Esq., on the laws relating to the relief of the Poor in Holland. [C-1620.] 29 pp., 8vo. 1876	
Elementary Teachers, National Union of, Reports for 1876-78. 12mo. London, 1878	The National Union of Elementary Teachers
London Hospital, General Statement of Patients under treatment in the, during the year 1878. 1 sheet	The House Com- mittee, London Hospital
Metropolitan Fire Brigade, Report of the Chief Officer on the state of the, and the Fires in London during the year 1878. 36 pp., 8vo. London	Captain E. M. Shaw
Paris Universal Exhibition of 1878. Statistical and descriptive notes introductory to the various classes of exhibits in the British Section. By P. L. Simmonds. 82 pp., 8vo. London. Paris	The Author
Tables showing the Bank Rates, Prices of Wheat, Red Hematite Ores, Scotch Pig Iron and Iron and Steel Rails, from 1863-78. Compiled by T. F. Hedley, F.S.S.....	The Compiler
Arts, Journal of the Society of. Current numbers. 8vo. London	The Society
British Association for the Advancement of Science, Reports of the 47th meeting held at Plymouth in 1877. Diagrams, &c., 8vo. London, 1878	
Labourer's Friend, The, Magazine of the Society for improving the condition of the labouring classes. No. 260. January, 1879. 28 pp., 8vo. London	The Society
Royal Asiatic Society, Journal of the. New series. Vol. ii, part 1. (January, 1879.) 128 pp., 8vo. London	
Royal Geographical Society, Proceedings of the. New series. Vol. i, Nos. 1—3. 8vo. London	"
Surveyors, Transactions of the Institution of. Vol. xi, Supplement, and parts, 5—9. 8vo. London.....	
ANSELL (C., junior). On the Rate of Mortality, and other Statistics of Families in the Upper and Professional Classes. 88 pp., cloth, diagrams, 8vo. London, 1874	The Author
ASHWORTH (HENRY). Cobden and the League. 295 pp., cloth, photographs, 12mo. London.....	

Donations—Contd.

Donations.	By whom Presented.
BOCCARDO, (GEROLAMO) <i>La Legge di Periodicit� delle crisi, Perturbazioni economiche e Macchie Solari.</i> 30 pp., 8vo. Roma, 1879	The Author
BODDY (E. M., F.R.C.S., &c.). <i>Hydropathy; or the Practical Use of Cold Water.</i> 51 pp., 8vo. London, 1879	"
COOK (JOHN). <i>An Address to the Proprietors of Bank Stock, on the reduction of the dividend on 14th March last.</i> 15 pp., 8vo. London, 1839	Professor W. S. Jevons, F.R.S., &c.
JEVONS (W. STANLEY). <i>A Serious Fall in the Value of Gold ascertained, and its social effects set forth, with two diagrams.</i> 73 pp., 8vo. London, 1863	"
MUSSET (ROBERT). <i>A Series of Tables exhibiting the gain and loss to the fundholder arising from the fluctuations in the value of the currency, from 1800-21.</i> (226 tables.) 11 pp., 8vo. London, 1821	"
NOURSE (B. F.) and } <i>The Silver Question. Papers read</i> JEVONS (Prof. W. S.) } <i>before the American Social</i> Science Association at Saratoga, 5th September, 1877. 32 pp., 8vo. Boston, 1877	"
WILLIAMSON (STEPHEN). <i>Depreciation in the Value of Silver. Reasons for the adoption of a bi-metallic money system. 2nd letter addressed to the President of the Liverpool Chamber of Commerce.</i> 56 pp., 8vo. London, 1876	"
HOOD (C., F.R.S., &c.). <i>A Practical Treatise on Warming Buildings by Hot Water, Steam, and Hot Air; on Ventilation, &c.</i> 463 pp., 8vo. London, 1879	The Author
H�BBE-SCHLEIDEN. <i>Ethiopien. Studien �ber West Afrika mit einer neu entworfenen, special-karte.</i> 412 pp., map, 8vo. Hamburg, 1879	E. G. Ravenstein, Esq., F.R.G.S.
INGALL'S <i>Stock Exchange Manual. Foreign.</i> Compiled by G. D. Ingall. 23rd edition, 1879. 184 pp., 24mo. London	W. T. F. M. Ingall, Esq.
MERCATOR (ERNST). <i>Differenzen, ein volkswirthschaftlicher Versuch. Bei Anlass der Er�ffnung der Neuen B�rse in Frankfurt-am-Main.</i> 83 pp., 8vo. Frankfurt-am-Main, 1879	The Author
Over-Population Craze, <i>The; A Refutation and a Plea by Anti-Malthusian.</i> 32 pp., 8vo. London, 1879	J. Luttmann, Esq.
SMITH (GEORGE, LL.D.) <i>The Life of John Wilson, D.D., F.R.S.</i> 652 pp., plate, roy., 8vo. London, 1878	The Author
VINE (J. R. SOMERS.) <i>The County Companion, Diary Statistical Chronicle, &c., for 1879.</i> xxviii and 640 pp. Morocco, 8vo. London	The Editor
VINE (J. R. SOMERS). <i>The Municipal Corporations Companion, Diary, Directory and Yearbook of Statistics for 1879.</i> xxxvi and 584 pp., morocco, 8vo. London	"
WELLS (DAVID A.). <i>The Sugar Industry of the United States and the tariff. Report on the assessment and collection of duties on imported sugars.</i> 119 pp., 8vo. New York, 1878	The Author
WRIGHT (GEORGE, F.S.S.). <i>Mutual Banking or Money Lending on Mutual Principles.</i> 15 pp., 8vo. Ipswich	"

Donations—Contd.

Donations.	By whom Presented.
<i>Periodicals—</i>	
Athenæum, The. (Monthly parts) Current numbers	The Editor
Bankers' Magazine (London)	"
Commercial World, The.....	"
Economist, The	"
Insurance Gazette, The	"
Insurance Record, The	"
Investors' Monthly Manual, The	"
Nature	"
Review, The.....	"
Statist, The	"

Purchased.

Almanach de Gotha for 1879.

Annales d'Hygiène publique. Current numbers.

Archivio di Statistica. Current numbers.

Coal: Its History and Uses. By Professors Green, Miall, Thorpe, Rücker, and Marshall. 363 pp., plates, diagrams, &c., 8vo. London, 1878.

Franzini (S.). Statistique de la Suisse. 8vo. Geneve, 1855.

Journal des Economistes. Current numbers.

Post Magazine Almanac and Insurance Directory for 1878 and 1879.

Post Office London Directory for 1879.

Price (F. G. Hilton). A Handbook of London Bankers, with some Account of their Predecessors, the early Goldsmiths. 344 pp., 8vo. London, 1876.

Price (Prof. Bonamy). Chapters on Practical Political Economy. 559 pp., 8vo. London, 1878.

Statesman's Year Book for 1879.

Surtees Society. Publications of the. Vol. lxviii, for 1877.

Whitaker's Almanac for 1879.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—To 30TH SEPTEMBER, 1878.

BIRTHS AND DEATHS—To 31ST DECEMBER, 1878.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1878-72, and in the QUARTERS of those Years.*

Calendar YEARS, 1878-72:—Numbers.

Years	'78.	'77.	'76.	'75.	'74.	'73.	'72.
Marriages No.	—	194,343	201,835	201,212	202,010	205,615	201,267
Births..... „	891,418	887,055	887,464	850,607	854,956	829,778	825,907
Deaths „	539,574	500,348	510,308	546,453	526,632	492,520	492,265

QUARTERS of each Calendar Year, 1878-72.

(I.) MARRIAGES:—*Numbers.*

<i>Qrs. ended last day of</i>	'78.	'77.	'76.	'75.	'74.	'73.	'72.
March..... No.	39,106	39,755	41,757	42,376	41,413	41,217	40,539
June „	48,433	49,054	51,218	48,410	52,827	53,408	50,380
September „	46,510	47,732	49,135	49,826	49,144	49,709	49,818
December „	—	57,802	59,725	60,600	58,626	61,281	60,530

(II.) BIRTHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'78.	'77.	'76.	'75.	'74.	'73.	'72.
March..... No.	221,567	230,036	229,980	214,862	214,514	215,744	208,752
June „	228,702	223,220	225,866	214,939	217,598	206,516	208,790
September „	222,004	213,190	216,167	211,109	210,323	204,167	201,746
December „	219,145	220,609	215,451	209,697	212,521	203,351	206,619

(III.) DEATHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'78.	'77.	'76.	'75.	'74.	'73.	'72.
March..... No.	139,825	135,000	142,269	162,256	136,518	132,432	134,952
June „	129,111	131,289	126,212	130,999	123,907	118,582	120,835
September „	129,348	109,565	119,909	121,547	124,253	114,676	118,927
December „	141,290	124,494	121,918	131,651	141,954	126,830	117,551

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1878-72, and in the QUARTERS of those Years.*

Calendar YEARS, 1878-72:—General Ratios.

YEARS.....	'78.	Mean '68-77.	'77.	'76.	'75.	'74.	'73.	'72.
Estmtd. Popln. of England in thousands in middle of each Year....	24,854,	—	24,547,	24,244,	23,944,	23,649,	23,356,	23,068,
Persons Mar- ried	—	16·6	15·8	16·6	16·8	17·1	17·6	17·5
Births	35·9	35·7	36·1	36·5	35·5	36·2	35·5	35·8
Deaths.....	21·7	21·9	20·4	21·0	22·8	22·3	21·1	21·3

QUARTERS of each Calendar Year, 1878-72.

(I.) PERSONS MARRIED:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'78.	Mean '68-77.	'77.	'76.	'75.	'74.	'73.	'72.
March	12·8	13·7	13·1	13·8	14·4	14·2	14·3	14·1
June.....	15·6	16·9	16·0	16·9	16·2	17·9	18·3	17·5
September	14·8	16·2	15·4	16·1	16·5	16·5	16·9	17·1
December	—	19·7	18·7	19·5	20·1	19·7	20·8	20·8

(II.) BIRTHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'78.	Mean '68-77.	'77.	'76.	'75.	'74.	'73.	'72.
March	36·2	37·1	38·0	38·0	36·4	36·8	37·5	36·3
June.....	36·9	36·2	36·5	37·4	36·0	36·9	35·5	36·3
September	35·4	34·6	34·5	35·4	35·0	35·3	34·7	34·7
December	35·0	34·8	35·7	35·3	34·7	35·7	34·5	35·5

(III.) DEATHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'78.	Mean '68-77.	'77.	'76.	'75.	'74.	'73.	'72.
March	22·8	24·0	22·3	23·5	27·5	23·4	23·0	23·5
June.....	20·8	21·1	21·5	20·9	21·9	21·0	20·4	21·0
September	20·6	20·6	17·7	19·6	20·1	20·8	19·5	20·5
December	22·6	21·8	20·1	20·0	21·8	23·8	21·5	20·2

B.—Comparative Table of CONSOLS, PROVISIONS, COAL, and PAUPERISM in each QUARTER of 1876-77-78.

Average Prices of								PAUPERISM.	
Quarters ending	CONSOLS (for Money) per 100 <i>l.</i> Stock.	Dis- COUNT charged by the Bank of England	WHEAT per Quarter in England and Wales.	MEAT per Pound at the Metropolitan Meat Market (by the Carcass), with the <i>Mean</i> Prices.		POTATOES (Best Quality) per Ton at Waterside Market, Southwark.	COAL (Sea- borne) in the London Market per Ton.	Quarterly Average of the Number of Paupers Relieved on the <i>Last Day</i> of each Week	
				Beef.	Mutton.			In-door.	Out-door.
1876	£		<i>s. d.</i>	<i>d. d. d.</i>	<i>d. d. d.</i>	<i>s. s. s.</i>	<i>s. d.</i>		
Mar. 31	94 $\frac{1}{8}$	4'1	43 8	5 $\frac{1}{2}$ —8 $6\frac{3}{4}$	5 $\frac{1}{2}$ —9 $7\frac{1}{4}$	122—151 136	19 9	145,088	558,026
June 30	95 $\frac{1}{2}$	2'2	45 10	5—8 $\frac{1}{4}$ $6\frac{5}{8}$	5—10 $7\frac{1}{2}$	125—170 147	18 8	134,357	535,419
Sept. 30	95 $\frac{7}{8}$	2'0	47 1	5 $\frac{1}{4}$ —8 $\frac{1}{2}$ $6\frac{7}{8}$	5 $\frac{3}{4}$ —9 $\frac{3}{4}$ $7\frac{3}{4}$	—	19 —	130,347	517,196
Dec. 31	95 $\frac{5}{8}$	2'0	48 2	4 $\frac{1}{2}$ —8 $6\frac{1}{4}$	5 $\frac{1}{4}$ —9 $7\frac{1}{8}$	—	19 —	141,929	514,722
1877									
Mar. 31	95 $\frac{7}{8}$	2'0	51 4	4 $\frac{1}{2}$ —7 $\frac{3}{4}$ $6\frac{1}{8}$	5—9 $\frac{3}{8}$ $7\frac{1}{8}$	138—172 155	16 8	152,778	532,697
June 30	94 $\frac{7}{8}$	2'9	61 5	4 $\frac{1}{2}$ —8 $\frac{1}{4}$ $6\frac{3}{8}$	4 $\frac{3}{4}$ —9 $\frac{1}{4}$ 7	136—174 155	18 2	143,674	523,878
Sept. 30	95 $\frac{1}{8}$	2'4	62 —	4 $\frac{1}{2}$ —8 $\frac{1}{4}$ $6\frac{1}{2}$	4 $\frac{3}{4}$ —9 $\frac{1}{2}$ $7\frac{1}{2}$	97—126 111	17 7	139,211	509,110
Dec. 31	96 $\frac{1}{4}$	4'5	52 4	3 $\frac{3}{4}$ —8 $5\frac{7}{8}$	4 $\frac{1}{4}$ —8 $\frac{3}{4}$ $6\frac{1}{2}$	152—174 163	18 3	151,701	512,339
1878									
Mar. 31	95 $\frac{3}{8}$	2'4	50 10	4 $\frac{1}{8}$ —8 $\frac{1}{8}$ $6\frac{1}{8}$	4 $\frac{5}{8}$ —9 $\frac{1}{4}$ 7	188—212 200	16 2	162,442	540,571
June 30	95 $\frac{5}{8}$	2'8	50 2	4 $\frac{1}{2}$ —8 $\frac{5}{8}$ $6\frac{5}{8}$	5—9 $\frac{1}{2}$ $7\frac{1}{4}$	150—187 168	16 4	151,715	533,787
Sept. 30	95 $\frac{1}{8}$	4'3	44 6	4 $\frac{1}{2}$ —8 $\frac{1}{8}$ $6\frac{3}{8}$	4 $\frac{3}{4}$ —9 $\frac{1}{4}$ 7	120—151 135	16 —	145,956	513,616
Dec. 31	95	5'4	40 2	4 $\frac{1}{4}$ —7 $\frac{3}{4}$ 6	4 $\frac{7}{8}$ —8 $\frac{3}{4}$ $6\frac{7}{8}$	111—132 121	17 4	159,721	523,996

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England and Wales.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years,		Year	1878. Quarters ending			
	1851-60.	1861-70.		March.	June.	Sept.	Dec.
England and Wales	22'2	22'4	20'4	22'8	20'8	20'6	22'6
I. London	23'6	24'3	21'9	25'6	22'5	22'1	23'7
II. South-Eastern	19'6	19'1	16'4	19'2	16'9	16'8	18'2
III. South Midland	20'4	20'2	17'2	19'8	17'8	18'0	19'7
IV. Eastern	20'6	20'1	18'4	20'6	18'4	19'0	19'9
V. South-Western	20'0	19'9	18'2	21'8	19'8	16'1	19'3
VI. West Midland	22'4	21'8	20'3	23'2	20'1	19'8	23'3
VII. North Midland	21'1	20'8	20'1	21'1	20'1	20'9	21'5
VIII. North-Western	25'5	26'3	24'1	26'2	24'1	25'1	28'1
IX. Yorkshire	23'1	24'0	21'0	21'6	21'6	22'9	24'3
X. Northern	22'0	22'7	20'7	21'3	20'9	22'8	21'7
XI. Monmthsh. and Wales	21'3	21'6	21'0	24'2	22'2	17'9	20'2

D.—*Special Average Death-Rate Table*.—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1878-76.

	Area in Statute Acres.	Population Enumerated. 1871.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1878.	Mean '68-77.	1877.	1876.
In 134 Districts, and 57 Sub-districts, comprising the Chief Towns	3,184,419	12,900,142	March .. June Sept. Dec.	24·5 22·2 23·1 24·8	25·8 22·5 23·1 24·2	23·8 22·7 19·2 22·2	25·3 22·1 21·7 21·9
			Year	23·7	23·9	22·0	22·8
In the remaining Dis- tricts and Sub-districts of England and Wales, comprising chiefly Small Towns and Country Parishes	34,134,802	9,812,124	Year March .. June Sept. Dec.	19·0 20·5 18·9 17·2 19·4	19·2 21·7 19·3 17·2 18·5	18·2 20·2 19·7 15·7 17·2	18·6 21·1 19·2 16·7 17·3

Note.—The three months January, February, March, contain 90, and in leap year 91 days; the three months April, May, June, 91 days; and each of the last two quarters of the year, 92 days. For this inequality a correction is made in calculating the rate of mortality in the different quarters of the year.

E.—*Special Town Table*.—POPULATION; BIRTH-RATE and DEATH-RATE in each Quarter of 1878, in TWENTY-THREE Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1878.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.	
		Annual Rate to 1,000 Living during the Thirteen Weeks ending							
		30th March.		29th June.		28th September.		28th December.	
		Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
Total of 23 towns in U. K.	8,373,953	38·1	25·5	37·6	23·2	35·9	23·5	35·6	25·2
London	3,577,304	37·7	25·6	36·2	22·5	35·5	22·1	35·6	23·7
Brighton	103,923	32·4	25·5	29·5	18·8	29·0	20·1	27·7	20·2
Portsmouth	129,461	33·0	17·6	34·7	19·8	32·1	20·1	32·3	18·4
Norwich	84,620	37·2	26·7	34·4	21·2	30·6	27·7	32·1	22·8
Plymouth	73,599	31·0	32·6	32·4	24·8	32·8	19·8	31·3	24·1
Bristol	206,419	36·3	22·6	36·9	20·3	33·9	18·0	34·3	24·8
Wolverhampton	74,240	39·9	25·4	39·1	22·0	36·8	20·5	36·3	25·3
Birmingham	383,117	43·4	27·4	43·0	21·7	40·4	25·7	40·6	27·4
Leicester	121,473	41·4	18·7	39·9	17·5	38·2	26·6	37·9	20·5
Nottingham	165,267	36·8	22·2	37·0	18·9	34·9	21·8	34·2	21·0
Liverpool	532,681	40·6	28·8	39·8	27·2	37·4	30·0	37·6	31·4
Manchester	360,514	39·2	29·1	39·5	26·9	37·2	26·5	36·8	28·9
Salford	170,251	42·4	24·4	44·5	21·9	41·9	26·6	40·1	29·4
Oldham	107,366	39·5	24·9	39·4	24·6	37·2	22·8	36·7	30·9
Bradford	185,088	35·7	22·0	37·3	20·9	35·8	21·8	34·4	24·8
Leeds	304,948	38·5	20·9	40·0	21·0	39·8	26·5	38·7	26·8
Sheffield	289,537	39·1	23·5	39·0	24·1	36·1	25·2	36·8	27·1
Hull	143,139	43·0	21·0	43·5	20·1	41·6	31·3	40·3	24·9
Sunderland	112,459	42·4	24·0	43·0	26·3	40·5	27·9	39·8	24·1
Newcastle-on-Tyne	144,570	38·8	23·2	38·2	22·1	38·7	25·5	36·5	24·2
Edinburgh	222,371	32·9	26·9	35·0	23·6	33·2	17·9	31·6	19·9
Glasgow	566,940	38·7	26·3	39·5	25·6	34·1	21·6	33·4	26·2
Dublin	314,666	32·2	31·4	31·9	30·4	30·2	25·6	27·0	30·9

F.—*Divisional Table*:—MARRIAGES in the Year ending 30th September; and BIRTHS and DEATHS in the Year ending 31st December, 1878, as Registered Quarterly.

1	2	3	4 5 6 7			
DIVISIONS. (England and Wales.)	AREA* in Statute Acres.	POPULATION, 1871. (Persons.)	MARRIAGES in Quarters ending			
			31st December, 1877.	31st March, 1878.	30th June, 1878.	30th September, 1878.
		No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	37,319,221	22,712,266	57,802	39,106	48,433	46,510
I. London	75,362	3,254,260	9,593	6,579	8,715	8,915
II. South-Eastern	3,994,431	2,167,726	5,153	3,317	4,323	4,145
III. South Midland	3,201,325	1,442,654	3,217	1,644	2,292	2,320
IV. Eastern	3,211,441	1,218,728	3,163	1,558	1,837	1,781
V. South-Western	4,981,170	1,880,777	3,643	2,736	3,276	3,005
VI. West Midland	3,945,460	2,721,931	6,860	4,325	5,472	5,225
VII. North Midland.....	3,535,445	1,406,935	3,566	2,219	3,241	2,594
VIII. North-Western.....	1,998,914	3,389,044	9,281	7,365	8,258	8,325
IX. Yorkshire	3,702,384	2,444,762	6,710	4,658	5,322	5,039
X. Northern	3,547,947	1,365,041	3,245	2,448	2,973	2,757
XI. Monmthsh. & Wales	5,125,342	1,420,408	3,371	2,257	2,724	2,404

8	9	10	11	12	13	14	15	16
DIVISIONS. (England and Wales.)	BIRTHS in each Quarter of 1878 ending				DEATHS in each Quarter of 1878 ending			
	31st March.	30th June.	30th Septem- ber.	31st Decem- ber.	31st March.	30th June.	30th Septem- ber.	31st Decem- ber.
	No.	No.	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	221,567	228,702	222,004	219,145	139,825	129,111	129,348	141,290
I. London	33,569	32,253	31,660	31,702	22,803	20,656	19,689	21,147
II. South-Eastern	18,762	18,684	18,974	19,061	11,536	10,308	10,326	11,194
III. South Midland.....	12,297	12,887	12,518	12,512	7,673	6,987	7,139	7,778
IV. Eastern	10,327	11,093	10,520	10,468	6,486	5,879	6,134	6,413
V. South-Western	14,243	14,590	13,864	14,007	10,303	9,460	7,781	9,324
VI. West Midland	26,965	27,811	26,583	26,811	16,777	14,755	14,691	17,276
VII. North Midland.....	14,125	15,105	14,487	14,194	7,780	7,509	7,908	8,110
VIII. North-Western.....	37,658	38,544	37,765	36,819	24,277	22,569	23,703	26,606
IX. Yorkshire	25,728	27,401	26,459	26,226	14,858	14,970	16,049	17,055
X. Northern	14,969	16,170	15,555	14,826	8,272	8,215	9,065	8,638
XI. Monmthsh. & Wales	12,924	14,164	13,619	12,519	9,060	8,403	6,863	7,749

* These are revised figures, and will be found to differ somewhat from those first published.

G.—General Meteorological Table,

[Abstracted from the particulars supplied to the

1878.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames				
	Months.	Mean.	Diff. from Average of 107 Years.	Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.	Mean.		Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.
Jan.	40·4	+3·9	+1·7	38·4	+1·2	36·0	+0·8	9·1	-0·6	41·3	·212	+·010	2·4	0·0
Feb.	42·2	+3·5	+2·9	40·5	+2·9	38·5	+3·5	9·7	-1·6	41·7	·233	+·027	2·7	+0·3
Mar. ...	42·0	+0·9	+0·4	38·5	-0·8	34·3	-2·0	13·5	-1·1	46·5	·198	-·018	2·3	-0·2
Mean ...	41·5	+2·8	+1·7	39·1	+1·1	36·3	+0·8	10·8	-1·1	43·2	·214	+·006	2·5	0·0
April ...	48·2	+2·1	+1·1	45·2	+1·2	42·0	+1·4	17·6	-1·0	48·3	·266	+·012	3·0	+0·1
May.	55·2	+2·7	+2·6	51·6	+2·7	48·1	+3·0	17·8	-2·7	59·0	·332	+·033	3·8	+0·3
June ...	60·3	+2·1	+1·3	55·8	+1·3	51·8	+1·2	20·6	-0·6	60·9	·387	+·017	4·3	+0·2
Mean ...	54·6	+2·3	+1·7	50·9	+1·7	47·3	+1·9	18·7	-1·4	56·1	·328	+·021	3·7	+0·2
July.	63·1	+1·5	+0·9	58·6	+0·9	54·7	+0·8	19·6	-1·6	67·7	·430	+·013	4·8	+0·2
Aug. ...	62·7	+0·9	+1·2	59·1	+1·7	56·1	+2·3	17·5	-2·4	66·2	·450	+·033	5·0	+0·4
Sept. ...	56·7	+0·2	-0·4	53·7	-0·2	50·9	-0·1	18·3	-0·2	58·4	·373	-·005	4·2	0·0
Mean ...	60·8	+0·9	+0·6	57·1	+0·8	53·9	+1·0	18·5	-1·4	64·1	·418	+·014	4·7	+0·2
Oct.	51·5	+1·9	+1·3	49·0	+0·9	46·4	+0·4	14·0	-0·8	55·2	·317	+·005	3·5	-0·1
Nov. ...	39·7	-2·6	-3·9	38·2	-3·2	36·2	-3·3	9·3	-2·3	42·6	·214	-·033	2·5	-0·3
Dec. ...	33·7	-5·4	-6·5	32·8	-5·9	31·2	-5·7	8·4	-1·0	35·9	·175	-·046	2·1	-0·5
Mean ...	41·6	-2·0	-3·0	40·0	-2·7	37·9	-2·9	10·6	-1·4	44·6	·235	-·025	2·7	-0·3

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies

The mean temperature of the air for October was 51°·5, being 1°·9 and 1°·3 above the averages of the preceding 107 years and 37 years respectively. It was 2°·9 higher than the value in 1877.

The mean temperature of the air for November was 39°·7, being 2°·6 and 3°·9 below the averages of the preceding 107 years and 37 years respectively. It was lower than any value back to 1871, when it was 37°·6, and with this exception it is 16 years (or back to 1862) since we have had so cold a November as in the present year.

The mean temperature of the air for December was 33°·7, being 5°·4 and 6°·5 below the averages of the preceding 107 years and 37 years respectively.

The mean high day temperatures of the air were 4°·8 and 7°·7 below their averages in November and December, but 0°·6 above in October.

for the Year ended 31st December, 1878.

Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.						1878. Months.
Mean.	Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.	Mean.	Diff. from Average of 37 Years.	Amnt.	Diff. from Average of 63 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.		
									At or below 30°.	Between 30° and 40°.	Above 40°.				
84	− 3	In. 29·979	+ ·231	Grs. 556	+ 3	In. 0·9	− 1·1	Miles. 330	17	8	6	19·5	45·1	January	
87	+ 3	30·101	+ ·308	556	+ 3	1·1	− 0·4	219	6	18	4	19·7	45·0	Feb.	
75	− 7	29·890	+ ·154	552	+ 2	1·1	− 0·5	348	16	8	7	13·5	48·0	March	
82	− 2	29·990	+ ·231	555	+ 3	Sum 3·1	Sum − 2·0	Mean 299	Sum 39	Sum 34	Sum 17	Lowest 13·5	Highest 48·0	Mean	
79	+ 1	29·663	− ·100	541	− 2	4·3	+ 2·6	281	8	16	6	23·0	48·0	April	
78	+ 2	29·618	− ·168	532	− 9	4·3	+ 2·3	289	0	8	23	31·6	53·3	May	
74	0	29·770	− ·044	530	− 2	4·6	+ 2·7	205	0	1	29	38·0	54·5	June	
77	+ 1	29·684	− ·104	534	− 4	Sum 13·2	Sum + 7·6	Mean 258	Sum 8	Sum 25	Sum 58	Lowest 23·0	Highest 54·5	Mean	
75	0	29·863	+ ·060	528	0	0·3	− 2·3	218	0	2	29	39·0	60·2	July	
79	+ 3	29·586	− ·206	523	− 6	5·4	+ 3·0	261	0	0	31	45·0	57·9	August	
81	+ 1	29·819	+ ·015	534	+ 1	0·8	− 1·6	248	0	10	20	31·6	53·1	Sept.	
78	+ 1	29·756	− ·044	528	− 2	Sum 6·5	Sum − 0·9	Mean 242	Sum 0	Sum 12	Sum 80	Lowest 31·6	Highest 60·2	Mean	
83	− 4	29·602	− ·100	536	− 3	1·7	− 1·1	259	2	16	13	27·9	52·1	October	
88	0	29·571	− ·172	549	+ 1	3·5	+ 1·1	308	11	19	0	25·1	39·5	Nov.	
89	+ 1	29·546	− ·247	555	+ 3	1·2	− 0·9	248	21	8	2	12·2	45·0	Dec.	
87	− 1	29·573	− ·173	547	0	Sum 6·4	Sum − 0·9	Mean 272	Sum 34	Sum 43	Sum 15	Lowest 12·2	Highest 52·1	Mean	

below the average, and that the sign (+) plus signifies above the average.

The mean low night temperatures of the air were 2°·4 and 6°·5 below their averages in November and December, but 1°·4 above in October. Therefore the days and nights were cold in November and December (particularly so in the latter month), but somewhat warm in October.

The mean daily ranges of temperature were 0°·8, 2°·3, and 1°·0 respectively below their averages in October, November, and December.

The fall of rain at Greenwich in October was 1·7 in., being 1·1 in. below the average of 63 years. The fall in November was 3·5 ins., being 1·1 in. above the average, and the fall in December was 1·2 in., being 0·9 in. below the average. The total fall in the quarter was 6·4 ins., or 0·9 in. below the average.

No. II.—SCOTLAND.

BIRTHS, DEATHS, AND MARRIAGES, IN THE YEAR

ENDED 31ST DECEMBER, 1878.

I.—*Serial Table :—Number of BIRTHS, DEATHS, and MARRIAGES in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years 1878-74 inclusive.*

	1878.		1877.		1876.		1875.		1874.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	31,226	3'48	31,256	3'51	32,333	3'67	31,096	3'56	29,837	3'45
Deaths	20,320	2'26	20,525	2'31	21,294	2'41	25,116	2'87	20,775	2'40
Marriages ..	6,063	0'63	5,977	0'67	6,663	0'75	6,369	0'73	6,777	0'78
Mean Tem- perature }	39°·9		38°·5		37°·9		38°·7		40°·9	
2nd Quarter—										
Births	33,629	3'74	33,355	3'75	33,088	3'75	32,294	3'70	32,295	3'73
Deaths	19,514	2'17	19,586	2'20	19,270	2'18	19,518	2'23	19,640	2'27
Marriages ..	6,095	0'68	6,735	0'76	6,459	0'73	6,638	0'76	6,730	0'78
Mean Tem- perature }	50°·4		47°·5		49°·2		50°·73		49°·53	
3rd Quarter—										
Births	31,236	3'48	30,988	3'45	30,790	3'49	30,123	3'45	30,702	3'55
Deaths	17,344	1'93	15,919	1'79	16,465	1'87	18,050	2'07	18,099	2'09
Marriages ..	5,508	0'61	5,694	0'64	5,895	0'67	5,723	0'65	5,582	0'64
Mean Tem- perature }	57°·5		54°·0		56°·0		57°·27		56°·03	
4th Quarter—										
Births	30,616	3'41	31,225	3'51	30,538	3'46	30,180	3'45	30,961	3'58
Deaths	19,597	2'18	17,916	2'01	17,093	1'94	19,101	2'19	22,162	2'54
Marriages ..	6,662	0'74	7,384	0'83	7,546	0'86	7,191	0'82	7,158	0'83
Mean Tem- perature }	39°·2		42°·8		43°·5		41°·7		39°·5	
Year—										
Population.	3,593,929		3,560,715		3,527,811		3,495,214		3,462,916	
Births	126,707	3'53	126,824	3'56	126,749	3'59	123,693	3'54	123,795	3'57
Deaths	76,775	2'14	73,946	2'08	74,122	2'10	81,785	2'34	80,676	2'33
Marriages ..	24,333	0'68	25,790	0'72	26,563	0'75	25,921	0'74	26,247	0'76

[—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts for each Quarter of the Year ending 31st December, 1878, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*—

Registration Groups of Districts.	Total Births.			Illegitimate Births.			Deaths.			Marriages.		
	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio one in every	Number.	Per Cent.	Ratio one in every
<i>1st Quarter—</i> SCOTLAND	31,226	3'48	29	2,643	8'5	11'8	0,329	2'26	44	6,068	0'68	147
Principal towns	11,032	3'55	28	896	8'1	12'3	7,829	2'52	40	2,488	0'80	125
Large „	3,935	4'32	23	267	6'8	14'7	2,572	2'83	35	755	0'83	120
Small „	7,252	3'58	28	580	8'0	12'5	4,409	2'18	46	1,272	0'63	159
Mainland rural	8,228	3'13	32	856	10'4	9'6	4,976	1'90	53	1,297	0'49	204
Insular „	779	2'42	41	45	5'8	17'2	534	1'66	60	256	0'80	125
<i>2nd Quarter—</i> SCOTLAND	33,629	3'74	27	2,628	7'8	12'8	19,514	2'17	46	6,095	0'68	147
Principal towns	11,811	3'80	26	930	7'8	12'7	7,588	2'44	41	2,414	0'78	128
Large „	4,479	4'92	20	307	6'9	14'6	2,484	2'73	37	691	0'76	132
Small „	7,711	3'81	26	561	7'3	13'7	4,356	2'15	46	1,239	0'62	163
Mainland rural	8,886	3'39	30	785	8'8	11'3	4,593	1'75	57	1,648	0'63	160
Insular „	742	2'31	43	45	6'1	16'5	493	1'53	65	103	0'32	312
<i>3rd Quarter—</i> SCOTLAND	31,236	3'48	29	2,662	8'5	11'8	17,344	1'93	52	5,508	0'61	164
Principal towns	10,832	3'49	29	907	8'4	11'9	6,438	2'07	48	2,484	0'80	125
Large „	3,931	4'32	23	289	7'4	13'5	2,380	2'62	38	720	0'79	127
Small „	7,345	3'63	28	576	7'8	12'8	3,921	1'94	52	1,161	0'57	175
Mainland rural	8,290	3'16	32	840	10'1	9'9	4,183	1'59	63	1,088	0'41	244
Insular „	838	2'60	38	50	6'0	16'7	422	1'31	76	55	0'17	588
<i>4th Quarter—</i> SCOTLAND	30,616	3'41	29	2,655	8'67	11'5	19,597	2'18	46	6,662	0'74	135
Principal towns	10,622	3'42	29	926	8'7	11'5	7,555	2'43	41	2,342	0'75	133
Large „	3,880	4'26	23	268	6'9	14'5	2,763	3'04	33	784	0'86	116
Small „	7,210	3'56	28	572	7'9	12'5	4,327	2'14	47	1,492	0'74	135
Mainland rural	7,982	3'04	33	833	10'4	9'6	4,451	1'70	59	1,856	0'71	141
Insular „	922	2'87	35	56	6'1	16'4	501	1'56	64	188	0'58	172

Population of Scotland.

Population.	Scotland.	Principal Towns.	Large Towns.	Small Towns.	Mainland Rural.	Insular Rural.
By Census of 1871	3,360,018	1,079,211	318,740	767,487	1,062,576	132,004
Estimated to the middle of 1878	3,593,929	1,241,995	364,011	809,349	1,049,919	128,655

III.—*Bastardy Table:—Proportion of ILLEGITIMATE in every Hundred BIRTHS in the Divisions and Counties of SCOTLAND, during each quarter of the Year ending 31st December, 1878.*

Divisions and Counties.	Per Cent. for the Quarters ending			
	31st March.	30th June.	30th September.	31st December.
SCOTLAND	8·46	7·8	8·5	8·67
<i>Divisions—</i>				
Northern	8·9	9·0	7·1	6·1
North-Western	6·0	6·1	5·9	6·0
North-Eastern	14·9	13·0	14·0	14·1
East Midland	9·0	8·4	8·9	9·5
West Midland	6·4	5·6	6·2	7·7
South-Western	6·9	6·4	7·1	7·1
South-Eastern	7·5	7·6	8·4	7·6
Southern	14·1	11·3	13·4	14·3
<i>Counties—</i>				
Shetland	5·1	6·4	4·1	3·9
Orkney	9·6	7·2	7·6	6·0
Caithness	11·4	13·6	8·3	7·6
Sutherland	7·7	5·4	7·8	6·3
Ross and Cromarty	3·7	5·0	3·6	3·9
Inverness	8·1	7·0	8·1	8·0
Nairn	17·5	6·5	7·4	6·1
Elgin	22·2	14·8	16·2	15·6
Banff	17·3	14·0	16·4	14·6
Aberdeen	13·3	12·8	13·8	13·8
Kincardine	14·4	12·3	10·0	15·5
Forfar	9·3	9·8	9·9	11·3
Perth	9·6	7·3	10·4	9·4
Fife	8·0	6·9	6·9	6·6
Kinross	12·8	11·6	4·8	14·6
Clackmannan	9·5	7·4	7·0	7·7
Stirling	6·1	5·6	7·2	8·1
Dumbarton	5·6	4·8	4·3	6·1
Argyll	8·4	6·9	7·3	9·5
Bute	5·7	5·5	3·9	6·8
Renfrew	5·6	5·1	6·4	5·9
Ayr	6·9	6·7	7·5	7·5
Lanark	7·2	6·6	7·1	7·4
Linlithgow	7·6	9·1	7·9	8·2
Edinburgh	7·4	7·5	8·0	7·1
Haddington	8·5	6·1	10·1	5·4
Berwick	12·6	7·3	13·1	10·9
Peebles	7·5	8·7	4·8	9·6
Selkirk	2·7	7·1	8·0	10·1
Roxburgh	10·4	9·1	8·7	12·3
Dumfries	13·1	12·1	13·8	16·6
Kirkcudbright	16·7	11·2	16·3	14·4
Wigtown	18·0	12·9	16·1	12·7

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Year ended 31st December, 1878.*

(Compiled from the Registrar-General's Quarterly Returns).

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1871. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,360,018	24,333	126,707	76,775
I. Northern	2,261,622	127,191	615	2,994	1,865
II. North-Western.....	4,739,876	166,351	820	4,367	2,606
III. North-Eastern	2,429,594	393,199	2,592	13,608	7,034
IV. East Midland	2,790,492	559,676	3,568	18,895	11,377
V. West Midland	2,693,176	251,088	1,567	8,812	5,573
VI. South-Western.....	1,462,397	1,183,218	10,063	53,585	33,300
VII. South-Eastern	1,192,524	475,523	3,877	18,068	11,011
VIII. Southern	2,069,696	203,772	1,232	6,377	4,009

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Year ended 30th September, 1878; and of BIRTHS and DEATHS, in the Year ended 31st December, 1878.

(Compiled from the Quarterly Returns of the respective Registrars-General.)

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1871. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio
England and Wales }	37,319,	22,712,	191,851	8·4	891,418	39·2	539,574	23·8
Scotland	19,639,	3,360,	25,050	7·5	126,707	37·4	76,775	22·8
Ireland	20,323,	5,412,	25,434	4·7	134,370	24·8	99,839	18·4
GREAT BRITAIN AND IRELAND }	77,281,	31,484,	242,335	7·7	1,152,495	36·6	716,188	22·7

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have succeeded in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios of marriages, births, and deaths are much under those of England and Scotland.—Ed. S. J.

Trade of United Kingdom, 1877-73. — Value of the Total Exports of Foreign and Colonial Produce and Manufactures to each Foreign Country and British Possession.

Merchandise Exported to the following Foreign Countries, &c. [000's omitted.]	Declared Value.				
	1877.	1876.	1875.	1874.	1873.
I.—FOREIGN COUNTRIES.					
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	£ 4,587,	£ 4,951,	£ 5,478,	£ 5,116,	£ 4,891,
Central Europe; viz., Germany, Holland and Belgium	22,182,	23,543,	25,842,	24,016,	24,301,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries)	12,789,	14,343,	13,509,	14,560,	14,710,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,773,	2,066,	2,056,	2,105,	1,723,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	474,	593,	655,	668,	579,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	77,	76,	86,	93,	53,
Western Africa	299,	270,	259,	271,	288,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	—	—	—	29,	—
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	307,	183,	162,	34,	14,
South Sea Islands	—	—	—	—	—
China, including Hong Kong	344,	290,	407,	441,	537,
United States of America	3,509,	3,393,	3,194,	3,996,	3,124,
Mexico and Central America	119,	97,	125,	216,	235,
Foreign West Indies and Hayti	497,	595,	406,	490,	30,
South America (Northern), New Granada, Venezuela and Ecuador	33,	41,	58,	45,	48,
„ (Pacific), Peru, Bolivia, Chili, and Patagonia	264,	297,	360,	262,	362,
„ (Atlantic), Brazil, Uruguay, and Buenos Ayres	593,	406,	452,	512,	518,
Other countries (unenumerated)	150,	136,	79,	438,	57,
<i>Total—Foreign Countries</i>	47,997,	51,280,	53,128,	52,995,	51,470,
II.—BRITISH POSSESSIONS:					
British India, Ceylon, and Singapore	1,475,	1,433,	1,536,	1,437,	1,082,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zealand	2,218,	1,788,	1,733,	1,606,	1,615,
British North America	642,	668,	646,	879,	754,
„ W. Indies with Btsh. Guiana & Honduras	328,	347,	361,	325,	324,
Cape and Natal	387,	315,	441,	400,	311,
Brt. W. Co. of Af., Ascension and St. Helena	82,	84,	94,	41,	79,
Mauritius	106,	22,	26,	69,	33,
Channel Islands	184,	170,	150,	99,	156,
Other possessions	34,	30,	31,	241,	16,
<i>Total—British Possessions</i>	5,456,	4,857,	5,018,	5,097,	4,370,
General Total	£ 53,453,	£ 56,137,	£ 58,146,	£ 58,092,	£ 55,840,

de of United Kingdom, 1878-77-76.—Distribution of Exports* from United Kingdom, according to the Declared Real Value of the Exports; and the Declared Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.

Merchandise (excluding Gold and Silver) Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years.					
	1878.		1877.		1876.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
thern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	31,427,	10,859,	36,510,	10,172,	32,430,	12,619,
tral Europe; viz., Germany, Holland, and Belgium	57,134,	34,275,	59,106,	34,515,	51,568,	37,710,
stern Europe; viz., France, Portugal with Azores, Madeira, &c.), and Spain with Gibraltar and Canaries)	54,326,	21,128,	60,829,	21,355,	58,200,	23,758
thern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	6,825,	8,251,	8,350,	8,946,	6,990,	9,237,
vant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt	11,803,	10,841,	18,258,	8,083,	20,046,	9,259,
thern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,089	406,	1,874,	700,	1,517,	674,
stern Africa	1,269,	1,174,	1,525,	1,175,	1,478,	1,018,
stern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	538,	455,	543,	464,	416,	374,
lian Seas, Siam, Sumatra, Java, Philippines; other Islands	3,111,	2,563,	3,755,	3,394,	3,095,	2,416,
th Sea Islands	116	81,	82,	78,	123,	45,
ina and Japan, including Hong Kong	15,426,	9,212,	16,048,	10,119,	17,016,	9,722,
ited States of America	89,071,	14,621,	77,669,	16,313,	75,429,	16,804,
xico and Central America	1,500	1,503,	2,167,	1,925,	1,597,	1,218,
oreign West Indies, Hayti, &c.	2,217,	2,836,	2,099,	3,169,	3,527,	2,857,
uth America (Northern), New Granada, Venezuela, and Ecuador	1,164,	1,705,	722,	1,783,	967,	1,696,
" (Pacific), Peru, Bolivia, Chili, and Patagonia	7,957,	2,634,	8,321,	2,864,	9,625,	3,134,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres	6,375,	8,891,	8,775,	9,134,	7,595,	8,455,
hale Fisheries; Grmlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands	170,	22,	177,	21,	171,	—
<i>Total—Foreign Countries</i>	291,518,	131,457,	306,810,	134,210,	291,790,	140,996,
II.—BRITISH POSSESSIONS:						
itish India, Ceylon, and Singapore	32,975,	25,853,	38,396,	28,657,	35,812,	25,458,
ustral. Cols.—N. So. W., Victoria & Queensld.	13,029,	12,480,	14,682,	13,209,	14,342,	11,890,
" " So. Aus., W. Aus., Tasm., and N. Zealand	7,795,	7,089,	7,031,	6,072,	7,623,	5,763,
itish North America	9,441,	6,412,	12,010,	7,585,	10,946,	7,369,
" W. Indies with Btsh. Guiana & Honduras	6,334,	2,761,	7,117,	3,008,	7,190,	3,064,
pe and Natal	4,383,	4,911,	4,275,	4,114,	4,187,	4,366,
t. W. Co. of Af., Ascension and St. Helena	624,	897,	772,	833,	874,	741,
auritius	889,	409,	1,918,	494,	938,	342,
annel Islands	946,	535,	938,	549,	676,	587,
<i>Total—British Possessions</i>	76,416,	61,347,	87,139,	64,521,	82,588,	59,580,
General Total	£367,934,	192,804,	393,949,	198,731,	374,378,	200,576,

* i.e., British and Irish produce and manufactures.

IMPORTS.—(United Kingdom.)—For the Years 1878-77-76-75-74.—Declared Real Value (*Ex-duty*), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.

FOREIGN ARTICLES IMPORTED. [000's omitted.]		1878.	1877.	1876.	1875.	1874.
		£	£	£	£	£
RAW MATLS.— <i>Textile, &c.</i>	Cotton Wool	33,524,	35,489,	40,347,	46,320,	50,937,
	Wool (Sheep's) ..	24,589,	26,310,	24,980,	22,889,	22,640,
	Silk*	11,859,	12,498,	16,250,	10,546,	15,713,
	Flax	3,483,	5,055,	3,537,	4,380,	5,545,
	Hemp	5,156,	4,973,	1,952,	2,246,	2,211,
	Indigo	1,583,	1,636,	2,130,	1,621,	2,153,
		80,194,	85,961,	89,196,	88,002,	99,199,
" " <i>Various.</i>	Hides	6,266,	6,495,	6,273,	7,005,	6,815,
	Oils	3,184,	4,200,	4,786,	5,368,	4,778,
	Metals	10,632,	11,569,	10,252,	12,685,	11,109,
	Tallow	1,811,	2,570,	2,874,	2,037,	2,318,
	Timber	13,915,	20,191,	19,025,	15,362,	21,831,
		35,808,	45,025,	43,210,	42,457,	46,851,
" " <i>Agrettl.</i>	Guano	1,805,	1,667,	2,462,	1,292,	1,342,
	Seeds	8,690,	9,139,	8,970,	8,789,	7,470,
		10,495,	10,806,	11,432,	10,081,	8,812,
TROPICAL, &c., PRODUCE.	Tea	13,097,	12,482,	12,813,	14,167,	11,573,
	Coffee	6,093,	7,852,	6,413,	7,605,	7,103,
	Sugar & Molasses	21,107,	27,277,	20,620,	21,917,	16,083,
	Tobacco	3,718,	3,539,	3,946,	2,987,	3,875,
	Rice	3,192,	3,507,	2,927,	2,991,	3,622,
	Fruits	3,509,	4,334,	3,839,	3,789,	3,349,
	Wines	6,003,	7,156,	7,020,	6,821,	6,868,
	Spirits	2,209,	2,256,	3,963,	2,885,	2,612,
		58,928,	68,403,	61,541,	63,162,	55,085,
FOOD	Grain and Meal.	58,373,	63,210,	51,550,	52,714,	50,753,
	Provisions	35,951,	33,241,	32,837,	25,752,	25,868,
		94,324,	96,451,	84,387,	78,466,	76,621,
Remainder of Enumerated Articles		48,261,	47,795,	45,938,	52,973,	45,594,
TOTAL ENUMERATED IMPORTS		328,010,	354,441,	335,704,	335,141,	332,162,
Add for UNENUMERATED IMPORTS (say)		38,050,	39,500,	38,300,	38,800,	36,273,
TOTAL IMPORTS		366,060,	393,941,	374,004,	373,941,	368,435,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—For the Years 1878-77-76-75-74.—*Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.*

BRITISH PRODUCE, &c., EXPORTED. [000's omitted.]	1878.	1877.	1876.	1875.	1874.
	£	£	£	£	£
MANFRS.—Textile. Cotton Manufactures..	52,903,	56,954,	54,851,	58,565,	59,716,
„ Yarn	13,006,	12,209,	12,783,	13,170,	14,516,
Woolen Manufactures	16,723,	17,335,	18,620,	21,649,	22,795,
„ Yarn	3,910,	3,609,	4,417,	5,102,	5,559,
Silk Manufactures.....	1,921,	1,707,	1,769,	1,738,	2,100,
„ Yarn	564,	572,	1,073,	878,	1,030,
Linen Manufactures	5,526,	5,830,	5,621,	7,271,	7,124,
„ Yarn	1,213,	1,291,	1,460,	1,855,	1,721,
	95,766,	99,507,	100,594,	110,228,	114,561,
„ <i>Sewed.</i> Apparel	3,155,	2,833,	2,962,	3,185,	3,197,
Haberd. and Millnry.	3,966,	3,803,	3,771,	4,922,	6,131,
	7,121,	6,636,	6,733,	8,107,	9,328,
METALS, &c. Hardware	3,290,	3,336,	3,481,	4,265,	4,413,
Machinery	7,490,	6,683,	7,198,	9,099,	9,771,
Iron	18,394,	20,095,	20,731,	25,781,	31,225,
Copper and Brass.....	3,522,	3,503,	3,401,	3,730,	3,814,
Lead and Tin	1,057,	1,363,	1,202,	1,300,	1,648,
Coals and Culm	7,321,	7,829,	8,901,	9,646,	11,954,
	41,074,	42,809,	44,914,	53,821,	62,825,
Ceramic Manufcts. Earthenware and Glass	2,450,	2,614,	2,577,	2,812,	3,152,
Indigenous Mnfrs. and Products. Beer and Ale.....	1,762,	1,895,	1,922,	2,090,	2,451,
Butter	243,	247,	210,	240,	256,
Cheese	66,	72,	70,	88,	82,
Candles	170,	196,	151,	177,	187,
Salt.....	503,	463,	529,	676,	663,
Spirits	390,	373,	312,	277,	152,
Soda	—	—	—	2,300,	2,602,
	3,134,	3,246,	3,194,	5,848,	6,393,
Various Manufcts. Books, Printed	891,	896,	877,	915,	899,
Furniture	—	—	—	—	—
Leather Manufactures	2,003,	1,995,	3,343,	382,	3,547,
Soap	405,	365,	312,	311,	277,
Plate and Watches	221,	218,	247,	304,	285,
Stationery	647,	655,	659,	684,	688,
	4,167,	4,129,	5,438,	2,596,	5,696,
Remainder of Enumerated Articles	20,953,	22,509,	19,796,	22,882,	20,321,
Unenumerated Articles.....	18,139,	17,281,	17,330,	17,200,	17,160,
TOTAL EXPORTS.....	192,804,	198,731,	200,576,	223,494,	239,436,

SHIPPING.—(United Kingdom.)—Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the Twelve Months ended December, 1878-77-76.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1878.		1877.		1876.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	1,389,143	983,599	1,804,220	938,435	1,347,886	947,410
{ Southern „	364,882	237,811	156,737	56,542	304,843	197,537
Sweden	1,135,394	645,757	1,324,690	746,935	1,324,051	733,273
Norway	755,235	425,973	775,660	463,323	814,909	419,811
Denmark.....	226,282	609,992	202,402	658,951	215,169	659,497
Germany.....	1,709,058	2,277,658	1,705,672	2,317,399	1,448,435	2,427,213
Holland	1,226,814	1,361,961	1,206,035	1,322,876	1,130,599	1,301,758
Belgium	875,987	902,760	882,532	932,156	937,254	1,023,700
France.....	1,952,058	3,120,192	1,967,674	2,981,046	1,869,971	3,061,668
Spain.....	1,155,908	665,720	1,184,911	696,039	836,126	656,192
Portugal.....	219,861	316,824	219,158	314,078	195,262	336,861
Italy.....	254,066	894,049	336,877	869,110	288,482	947,649
Austrian territories	39,570	85,108	37,869	88,616	25,640	88,350
Greece.....	64,581	72,099	79,334	64,445	50,060	67,203
Turkey (including Walla- chia and Moldavia) ... }	301,974	385,180	338,543	221,353	524,107	325,041
Egypt	201,656	394,598	417,790	470,357	418,332	487,426
United States of America ...	4,718,304	2,369,354	4,070,538	2,029,537	4,013,481	2,146,493
Mexico, Foreign West Indies, and Central America	223,154	412,414	198,730	413,946	254,401	415,191
Brazil	199,069	491,033	230,793	474,667	194,651	423,680
Peru	239,363	69,667	215,438	85,543	288,892	102,279
Chili	32,560	176,520	52,156	186,439	60,475	206,372
China	170,288	20,281	150,222	28,887	136,843	23,347
Other countries	554,384	626,100	649,728	638,132	573,197	578,971
Total, Foreign Countries	18,009,591	17,544,650	18,207,709	16,998,812	17,253,066	17,576,922
BRITISH POSSESSIONS.						
North American Colonies ...	1,248,277	686,395	1,641,153	707,982	1,512,571	678,960
East Indies, including Ceylon, Singapore, and Mauritius	1,040,738	1,416,506	1,277,962	1,698,887	1,191,255	1,543,096
Australia and New Zealand	309,906	597,995	269,018	598,391	346,478	523,524
West Indies	182,699	160,577	173,338	160,589	214,684	162,201
Channel Islands.....	288,739	182,052	289,199	174,691	265,924	172,121
Other possessions	238,296	993,513	273,097	857,668	235,390	846,782
Total, British Possessions	3,308,655	4,037,038	3,923,767	4,198,208	3,766,302	3,926,684
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Twelve months { 1878.....	21,318,246	21,581,688	—	—	—	—
{ '77.....	—	—	22,131,476	21,197,020	—	—
{ '76.....	—	—	—	—	21,019,368	21,503,606

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — Declared Real Value for the Whole Years, 1878-77-76.

[000's omitted.]

(Whole Years.)	1878.		1877.		1876.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from—	£	£	£	£	£	£
Australia	5,681,	21,	6,655,	38,	4,957,	15,
So. Amca., including } Mexico and W. } Indies	1,591,	3,548,	1,172,	3,394,	2,442,	3,145,
United States	866,	1,616,	2,062,	2,616,	4,372,	2,637,
	8,138,	5,185,	9,889,	6,048,	11,771,	5,797,
France	5,908,	1,741,	873,	1,521,	1,427,	1,341,
Germany, Holl. & Belg.	2,019,	4,100,	1,036,	13,855,	2,682,	5,538,
Prtgl., Spain, and Gbrltr.	376,	77,	501,	46,	545,	45,
Mlta. and Egypt	1,578,	43,	317,	107,	398,	25,
China, including } Hong Kong	430,	1,	187,	1,	809,	16,
West Coast of Africa	122,	41,	121,	11,	146,	22,
All other Countries ...	2,801,	361,	2,528,	122,	5,699,	797,
Totals Imported ...	20,872,	11,549,	15,452,	21,711,	23,477,	13,581,
Exported to—						
France	4,599,	2,191,	6,147,	768,	4,189,	1,833,
Germany, Holl. & Belg.	5,324,	1,645,	8,404,	166,	2,684,	592,
Prtgl., Spain, and Gbrltr.	1,316,	729,	744,	1,566,	2,367,	203,
	11,239,	4,565,	15,295,	2,500,	9,240,	2,628,
Ind. and China.....	233,	5,840,*	609,	16,361,	217,	9,492,
United States	829,	1,083,	1,168,	298,	3,524,	378,
South Africa	347,	—	485,	7,	230,	5,
So. Amca., including } Mexico and W. } Indies	809,	39,	683,	59,	1,199,	178,
All other Countries ...	1,512,	191,	2,121,	212,	2,105,	267,
Totals Exported ...	14,969,	11,718,	20,361,	19,437,	16,515,	12,948,
Excess of imports ...	5,903,	—	—	2,274,	6,962,	633,
„ exports ...	—	169,	4,909,	—	—	—

* This entry is now shown direct, instead of to Egypt as formerly.

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES)
Weekly for 1878.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on Saturday.	Weekly Average. (Per Imperial Quarter.)			Weeks ended on Saturday.	Weekly Average. (Per Imperial Quarter.)		
	Wheat.	Barley.	Oats.		Wheat.	Barley.	Oats.
1878.	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	1878.	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
January 5	51 8	43 1	24 5	July 6	46 —	37 2	27 11
„ 12	52 1	43 5	23 8	„ 13	44 8	39 10	26 4
„ 19	52 1	44 8	23 9	„ 20	44 5	35 5	27 6
„ 26	51 10	44 8	24 0	„ 27	44 7	37 4	28 5
February 2	51 11	44 6	23 11	August 3	44 10	33 3	27 —
„ 9	51 5	44 3	24 10	„ 10	44 1	35 3	24 1
„ 16	50 11	44 2	24 4	„ 17	44 2	33 3	26 1
„ 23	51 3	44 —	24 1	„ 24	45 2	36 3	27 9
March 2	50 10	43 6	23 10	„ 31	45 8	42 1	26 2
„ 9	50 2	43 2	24 2	September 7 ..	45 4	42 5	25 4
„ 16	49 6	42 2	23 9	„ 14	45 —	41 11	24 4
„ 23	48 11	42 —	24 7	„ 21	43 2	40 11	23 6
„ 30	48 9	41 5	23 11	„ 28	41 5	41 1	22 10
April 6	50 —	42 —	25 3	October 5	40 4	40 6	22 3
„ 13	51 5	41 9	24 10	„ 12	39 9	40 1	21 10
„ 20	51 11	41 7	25 6	„ 19	39 3	40 4	22 2
„ 27	51 8	42 6	25 10	„ 26	39 —	40 5	21 10
May 4	52 1	40 6	25 8	November 2 ..	39 —	39 9	22 11
„ 11	52 4	40 2	25 8	„ 9	39 8	39 7	22 5
„ 18	52 1	39 5	26 3	„ 16	40 7	39 4	21 3
„ 25	51 2	39 6	26 5	„ 23	41 2	39 9	21 7
June 1	50 4	39 10	26 2	„ 30	41 3	40 1	21 3
„ 8	49 —	39 10	24 9	December 7 ..	40 11	39 4	21 1
„ 15	47 10	39 2	27 2	„ 14	40 10	38 10	21 6
„ 22	46 9	30 9	26 2	„ 21	40 8	39 4	21 1
„ 29	46 1	35 2	26 10	„ 28	39 9	38 3	20 7

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES),
Summary for 1878.

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Average for	Per Imperial Quarter.					
	Wheat.		Barley.		Oats.	
1878.	s.	d.	s.	d.	s.	d.
January	51	11	43	11	23	11
February.....	51	4	44	2	24	3
March	49	7	42	5	24	—
<i>First quarter</i>	50	10	43	5	24	1
April	51	3	41	11	25	4
May.....	51	11	39	10	26	—
June	48	—	36	11	26	2
<i>Second quarter</i>	50	2	39	4	25	10
July.....	44	11	37	5	27	6
August	44	9	36	—	26	2
September	43	8	41	7	24	—
<i>Third quarter</i>	44	6	38	4	25	11
October	39	7	40	4	22	—
November	40	4	39	8	21	10
December	40	3	38	11	21	—
<i>Fourth quarter</i>	40	2	39	7	21	8
THE YEAR 1878	46	5	40	2	24	4

BANK OF ENGLAND.

Pursuant to the Act 7th and 8th Victoria, cap. 32 (1844)

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES. (Wedn'sdays.)	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.		Government Debt.	Other Securities.	Gold Coin and Bullion.		
£	1878.	£	£	£	£	1878. Per cent.
Mins.		Mins.	Mins.	Mins.	Mins.	
38,67	Jan. 2	11,02	3,98	23,67	27,33	
38,75	" 9	11,02	3,98	23,75	27,60	9 Jan. 3
38,73	" 16	11,02	3,98	23,73	27,39	
38,76	" 23	11,02	3,98	23,76	27,10	
38,86	" 30	11,02	3,98	23,86	26,88	30 " 2
39,02	Feb. 6	11,02	3,98	24,02	27,17	
38,80	" 13	11,02	3,98	23,80	26,58	
38,70	" 20	11,02	3,98	23,70	26,33	
38,32	" 27	11,02	3,98	23,32	26,53	
38,25	Mar. 6	11,02	3,98	23,25	26,91	
38,37	" 13	11,02	3,98	23,27	26,68	
38,20	" 20	11,02	3,98	23,20	26,73	
37,92	" 27	11,02	3,98	22,92	27,11	27 Mar. 3
37,58	April 3	11,02	3,98	22,58	27,93	
37,09	" 10	11,02	3,98	22,09	27,93	
36,82	" 17	11,02	3,98	21,82	28,06	
36,72	" 24	11,02	3,98	21,72	27,71	
36,63	May 1	11,02	3,98	21,63	28,17	
36,85	" 8	11,02	3,98	21,85	28,10	
37,24	" 15	11,02	3,98	22,24	27,73	
37,07	" 22	11,02	3,98	22,07	27,47	
37,32	" 29	11,02	3,98	22,32	27,12	29 May 2½
37,15	June 5	11,02	3,98	22,15	27,40	
37,60	" 12	11,02	3,98	22,60	27,49	
37,82	" 19	11,02	3,98	22,82	27,10	
37,34	" 26	11,02	3,98	22,34	27,58	26 June 3
36,52	July 3	11,02	3,98	21,52	28,52	3 July 3½
36,60	" 10	11,02	3,98	21,60	28,36	
36,32	" 17	11,02	3,98	21,32	28,07	
36,13	" 24	11,02	3,98	21,13	27,75	
36,00	" 31	11,02	3,98	21,00	28,06	31 " 4
35,79	Aug. 7	11,02	3,98	20,79	28,18	
35,68	" 14	11,02	3,98	20,68	27,77	
35,67	" 21	11,02	3,98	20,67	27,47	12 Aug. 5
35,98	" 28	11,02	3,98	20,98	27,07	
36,66	Sept. 4	11,02	3,98	21,66	27,31	
37,19	" 11	11,02	3,98	22,19	26,90	
37,62	" 18	11,02	3,98	22,62	26,70	
37,97	" 25	11,02	3,98	22,97	26,59	
37,90	Oct. 2	11,02	3,98	22,90	28,00	
38,22	" 9	11,02	3,98	23,22	28,94	
37,42	" 16	11,02	3,98	22,42	29,83	
38,33	" 23	11,02	3,98	23,33	30,08	14 Oct. 6
39,52	" 30	11,02	3,98	24,52	30,11	
39,66	Nov. 6	11,02	3,98	24,66	29,92	
39,85	" 13	11,02	3,98	24,85	29,36	
40,30	" 20	11,02	3,98	25,30	29,03	
40,51	" 27	11,02	3,98	25,51	28,76	20 Nov. 5
40,43	Dec. 4	11,02	3,98	25,43	29,41	
40,16	" 11	11,02	3,98	25,16	31,25	
40,60	" 18	11,02	3,98	25,60	32,33	
41,48	" 25	11,02	3,98	26,48	33,11	

—WEEKLY RETURN.

for Wednesday in each Week, during the Year 1878.

[0,000's omitted.]

8	9	10	11	12	13	14	15	16	17	18
BANKING DEPARTMENT.										
Liabilities.					DATES. (Wed'n'sdys.)	Assets.				Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	1878.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.	£ Mlns.
14.55	3.16	5.90	22.07	.26	Jan. 2	13.38	20.51	11.34	.71	45.94
14.55	3.33	4.39	25.36	.32	" 9	18.42	17.63	11.15	.75	47.95
14.55	3.37	3.66	26.18	.33	" 16	18.22	17.68	11.34	.85	48.09
14.55	3.37	3.71	26.11	.34	" 23	17.65	17.81	11.66	.96	48.08
14.55	3.37	3.68	26.14	.32	" 30	16.20	17.87	11.98	1.01	47.06
14.55	3.40	4.76	22.78	.31	Feb. 6	15.20	17.76	11.85	.99	45.80
14.55	3.41	5.70	22.26	.29	" 13	15.20	17.78	12.22	1.01	46.21
14.55	3.41	6.52	21.53	.26	" 20	15.20	17.67	12.37	1.03	46.27
14.55	3.40	6.89	23.33	.25	" 27	15.18	20.32	11.79	1.13	48.42
14.55	3.72	10.14	21.41	.30	Mar. 6	15.58	22.07	11.34	1.13	50.12
14.55	3.73	11.31	22.40	.30	" 13	15.54	24.00	11.59	1.16	52.29
14.55	3.75	11.82	23.06	.29	" 20	15.54	25.28	11.47	1.18	53.47
14.55	3.75	12.29	23.34	.29	" 27	16.39	25.92	10.81	1.10	54.22
14.55	3.74	9.85	23.20	.28	April 3	16.38	24.55	9.65	1.04	51.62
14.55	3.10	7.11	23.34	.31	" 10	16.56	21.62	9.16	1.07	48.41
14.55	3.11	7.24	22.36	.29	" 17	16.56	21.15	8.76	1.08	47.55
14.55	3.11	7.85	21.06	.26	" 24	16.44	20.34	9.01	1.04	46.83
14.55	3.10	7.35	22.01	.29	May 1	16.44	21.20	8.46	1.20	47.30
14.55	3.11	7.08	20.95	.30	" 8	15.56	20.48	8.75	1.20	45.99
14.55	3.11	6.73	21.42	.29	" 15	15.56	19.91	9.51	1.12	46.10
14.55	3.11	6.25	21.49	.29	" 22	15.56	19.39	9.60	1.14	45.69
14.55	3.11	6.74	21.29	.27	" 29	15.56	19.07	10.20	1.13	45.96
14.55	3.06	6.95	21.76	.29	June 5	16.55	19.21	9.75	1.10	46.61
14.55	3.07	7.18	21.13	.28	" 12	16.21	18.75	10.11	1.14	46.21
14.55	3.07	7.47	21.41	.30	" 19	16.21	18.77	10.72	1.10	46.80
14.55	3.08	7.94	21.95	.25	" 26	16.21	20.71	9.76	1.09	47.77
14.55	3.15	7.54	21.55	.27	July 3	15.97	22.01	8.00	1.08	47.06
14.55	3.32	4.76	22.90	.31	" 10	17.67	18.84	8.24	1.09	45.84
14.55	3.37	4.03	22.63	.33	" 17	16.75	18.89	8.25	1.02	44.91
14.55	3.36	3.57	21.34	.32	" 24	16.27	17.43	8.38	1.06	43.14
14.55	3.36	3.57	21.98	.29	" 31	16.18	18.67	7.94	.96	43.75
14.55	3.42	3.62	19.99	.30	Aug. 7	14.97	18.31	7.61	.99	41.88
14.55	3.42	3.54	21.00	.33	" 14	14.97	18.96	7.91	1.00	42.84
14.55	3.45	3.06	20.46	.32	" 21	14.87	17.70	8.20	1.07	41.84
14.55	3.41	3.44	20.62	.26	" 28	14.87	17.48	8.91	1.02	42.28
14.55	3.72	3.44	20.99	.29	Sept. 4	13.45	19.24	9.35	.95	42.99
14.55	3.73	4.43	19.91	.30	" 11	13.79	17.95	10.29	.89	42.92
14.55	3.77	4.58	20.33	.29	" 18	13.75	17.98	10.92	.87	43.52
14.55	3.77	4.67	20.09	.26	" 25	13.75	17.33	11.38	.88	43.34
14.55	3.78	4.50	21.94	.28	Oct. 2	14.25	20.03	9.90	.87	45.05
14.55	3.11	4.14	25.97	.31	" 9	16.94	20.93	9.28	.93	48.08
14.55	3.15	3.16	27.32	.30	" 16	16.94	23.02	7.59	.93	48.48
14.55	3.17	2.93	27.86	.31	" 23	16.34	23.31	8.25	.92	48.82
14.55	3.17	2.72	28.31	.27	" 30	16.04	22.64	9.41	.93	49.02
14.55	3.17	3.39	26.83	.31	Nov. 6	15.49	22.13	9.74	.89	48.25
14.55	3.19	2.66	26.88	.31	" 13	14.84	21.28	10.49	.98	47.59
14.55	3.20	2.95	26.90	.24	" 20	14.74	20.79	11.27	1.04	47.84
14.55	3.18	3.11	27.06	.22	" 27	14.74	20.64	11.75	.99	48.12
14.55	3.16	3.60	25.87	.24	Dec. 4	14.74	20.73	11.02	.93	47.42
14.55	3.18	4.48	26.37	.25	" 11	14.74	24.35	8.91	.83	48.83
14.55	3.20	5.13	26.69	.27	" 18	14.67	25.99	8.27	.91	49.84
14.55	3.22	5.58	27.87	.26	" 25	14.23	27.91	8.37	.97	51.48

REVENUE.—(UNITED KINGDOM.)—31ST DECEMBER, 1878-77-76-75.

Net Produce in QUARTERS and YEARS ended 31st Dec., 1878-77-76-75.

[000's omitted.]

QUARTERS, ended 31st Dec.	1878.	1877.	1878.		Corresponding Quarters.	
			Less.	More.	1876.	1875.
	£	£	£	£	£	£
Customs	5,484,	5,386,	—	98,	5,433,	5,506,
Excise	6,990,	6,855,	—	135,	7,053,	7,133,
Stamps	2,628,	2,735,	107,	—	2,692,	2,795,
Taxes	26,	46,	20,	—	39,	39,
Post Office	1,554,	1,577,	23,	—	1,552,	1,511,
Telegraph Service	325,	320,	—	5,	330,	330,
Property Tax	17,007,	16,919,	150,	238,	17,099,	17,314,
	440,	342,	—	98,	281,	211,
Crown Lands	17,447,	17,261,	150,	336,	17,380,	17,525,
	141,	141,	—	—	141,	136,
Interest on Advances	383,	337,	—	46,	276,	—
Miscellaneous	1,098,	644,	—	454,	880,	1,102,
<i>Totals</i>	19,069,	18,383,	150,	836,	18,677,	18,763,
			NET INCR. £686,			

YEARS, ended 31st Dec.	1878.	1877.	1878.		Corresponding Years.	
			Less.	More.	1876.	1875.
	£	£	£	£	£	£
Customs	20,165,	19,762,	—	403,	20,075,	19,740,
Excise	27,372,	27,368,	—	4,	27,853,	27,857,
Stamps	10,652,	10,968,	316,	—	10,946,	10,878,
Taxes	2,655,	2,636,	—	19,	2,488,	2,456,
Post Office	6,180,	6,133,	—	47,	5,970,	5,933,
Telegraph Service	1,330,	1,320,	—	10,	1,295,	1,170,
Property Tax	68,354,	68,187,	316,	483,	68,627,	68,034,
	6,031,	5,736,	—	295,	4,095,	3,921,
Crown Lands	74,385,	73,923,	316,	778,	72,722,	71,955,
	410,	410,	—	—	405,	395,
Interest on Advances	1,047,	954,	—	93,	797,	—
Miscellaneous	4,642,	3,393,	—	1,249,	3,555,	4,025,
<i>Totals</i>	80,484,	78,680,	316,	2,120,	77,479,	76,375,
			NET INCR. £1,804,			

JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1879.

The COLONY of VICTORIA: its PROGRESS and PRESENT POSITION. By
HENRY HEYLYN HAYTER, ESQ., *Government Statist of Victoria,*
Honorary Member of the Statistical Society of London, and of the
Royal Society of Tasmania; Corresponding Member of the
Adelaide Philosophical Society, &c., &c.

[Read before the Statistical Society, 18th March, 1879.]

HAVING an opportunity of reading a paper before this Society, I felt myself bound to offer to do so, if only in common gratitude to a body which did me the honour to enrol me within its ranks as an honorary member, whilst resident in a distant land, and unknown personally to any of its Fellows.

In choosing a subject, I have been influenced by the circumstance that I am now in England on official business relating to the colony of Victoria, of whose public service I am a member, and whose interests it is my duty to promote as far as possible. I believe I shall be furthering that object by giving publicity to facts which indicate the remarkable progress it has made since it sprang into being forty-three years since, and which tend to show its present position in the rank of nations.

Victoria is a colony which owes its existence entirely to the enterprise of private individuals unconnected with any company, and unassisted by Government. Two attempts to found a convict settlement at or near its principal port had failed, and the territory had in both cases been abandoned as unfit for the residence of civilised man, when some adventurers from the adjoining island of Tasmania crossed Bass's Straits and established themselves successfully at the sites of the present towns of Portland and Melbourne. Others followed, and soon began to push their way into the interior. These were met by the exploring party of Sir Thomas Mitchell, who, entering from New South Wales on the north, and traversing a considerable portion of the as yet unknown territory, was so struck with its wondrous capabilities that he named it Australia Felix, a title the aptness of which a subsequent

knowledge of the geniality of its climate, the excellence of its soil, and the then unsuspected richness of its mineral treasures has proved to be fully justified.

The territory of Victoria occupies no more than a thirty-fourth part of the great Australian continent, and is about the size of the island of Great Britain.* Owing to various causes, however, such has been its attractiveness as compared with the other colonies of the group, that 44 per cent. of the inhabitants of the whole continent have taken up their habitation in this colony.

The population at the last census, which was taken on the same day as that of the British Isles—namely, the 2nd April, 1871, was 731,528. Between that period and the end of 1878 the inhabitants had increased to 876,000, or by no less than 20 per cent. This large increase during less than eight years occurred after State-assisted immigration had virtually stopped, and irrespective of any special attractions offered by the discovery of new goldfields of importance, since none such were opened up. Indeed, during the whole period the yield of gold steadily decreased from year to year.

Notwithstanding the falling off in the gold yield, the revenue of the colony has been steadily increasing, and in each of the last two financial years has exceeded $4\frac{1}{2}$ millions sterling. In the latter of those years—namely, that ended with the 30th June, 1878—the revenue was collected under the following heads:—

	£
Customs	1,487,448
Excise.....	53,459
Duties on estates of deceased persons	72,500
„ bank notes	26,672
Land tax	50,227
Ports and harbours	22,647
Alienation of land	771,212
Occupation of land without alienation	186,337
Railways	1,202,280
Other public works	110,009
Post and telegraphs	239,002
Fees and fines	119,798
Miscellaneous	162,822
Total revenue	<u>4,504,413</u>

In not one of the other Australian colonies does the revenue *proper* approach in amount to that of Victoria. In New South Wales in 1876 and 1877 the *total* revenue was the greater, and exceeded 5 millions sterling; but nearly 70 per cent. of the amounts in these years were derived from land sales, whereas in

* Area of Victoria 88,198 square miles; area of the Australian continent 2,972,346 square miles; area of Great Britain 89,644 square miles.

Victoria the proportion from that source did not in either year exceed 17 per cent.

In no British colony outside of Australia, except the Dominion of Canada, does the revenue equal that of Victoria; and in Canada, with a population four times, and an area forty times greater, the revenue only exceeds that of Victoria by about an eighth.

In the Cape of Good Hope, which of British colonies outside of Australia is next below Victoria in point of revenue, and which is its equal in population, and has two-and-a-half times its area, the amount raised is only about half that raised in Victoria. In Ceylon, which in point of revenue comes next the Cape of Good Hope, and although smaller than Victoria, has nearly three times its population, the revenue raised is upwards of two-thirds less than that of Victoria.

The revenue of Victoria for years past has amounted to over 5*l.* per head of the population. No country in the world outside of Australia can show anything like such a result. If Great Britain were to raise as much per head as Victoria did in 1877-78, her revenue would amount to over 175,000,000*l.*, instead of to 79,000,000*l.*; should France do so, her revenue would amount to nearly 200,000,000*l.*, instead of to 107,000,000*l.*; should the United States do so, her revenue would amount to upwards of 200,000,000*l.*, instead of to 54,000,000*l.*

In comparing the revenues of different countries, it is important to distinguish the portion raised by taxation from that raised otherwise. In Victoria the former class consists of customs and excise duties, wharfage rates, port and harbour dues, business licences, land tax, duties on bank notes, and duties on estates of deceased persons. Of the latter class are the amounts derived from the sale and occupation of Crown lands, from railways, water supply, and other public works; from post and telegraph offices, from fines, fees, and forfeitures; from the labour of prisoners, and from interest on the public account, &c. Dividing the Victorian revenue for 1877-78 into these two classes, we have the following result:—

	£
Amount raised by taxation.....	1,712,953
„ otherwise	2,791,460
Total revenue	<u>4,504,413</u>

The amount raised by taxation, divided by the mean population of the colony during the financial year, furnishes a proportion of 1*l.* 19*s.* 10½*d.* to each individual, which is about equal to (that is, it exceeds by 2¼*d.* per head only) the taxation of the United Kingdom in 1877, but is lower by 12*s.* 2¼*d.* per head than the taxation of France in the same year.

The taxation of Victoria, according to the latest returns, was, in proportion to the population, lighter than that of any of the other Australian colonies except New South Wales, and there it was less than in Victoria by 1*s.* 7 $\frac{3}{4}$ *d.* per head. When it is considered that the general revenue of New South Wales is supplemented by nearly 4 millions per annum accruing from the proceeds of the sale of the public estate, whilst her population only numbers 660,000, it excites surprise that she should find it necessary to levy any taxes whatever.

The following are the amounts of taxation per head in the various Australasian colonies according to the latest information published. The colonies are placed in order, that in which the taxation is highest first and the others in succession :—

	£	s.	d.	
In New Zealand the taxation is	3	5	9 $\frac{3}{4}$	per head.
„ Queensland „	3	5	2 $\frac{1}{4}$	„
„ Western Australia „	2	18	11 $\frac{1}{4}$	„
„ Tasmania „	2	4	6 $\frac{1}{2}$	„
„ South Australia „	2	3	2 $\frac{1}{2}$	„
„ Victoria „	1	19	10 $\frac{1}{2}$	„
„ New South Wales „	1	18	2 $\frac{3}{4}$	„

The public debt of Victoria, inclusive of a loan of 3,000,000*l.*, which has been floated within the last few days, amounts to 20,022,065*l.* sterling.

Irrespective of the actual amount of its debt, the position of a country in regard to its indebtedness may be judged of in two ways—first, by the number of persons over whom the debt is distributed, and secondly, by the proportion the debt bears to the country's revenue.

The first of these tests is not so applicable to a new colony, where the population is being rapidly augmented by immigration as well as by births, and where the relative indebtedness of each individual is thus daily becoming lighter by natural means, as it is in an older country, where the population is nearly stationary. Victoria, however, stands this ordeal as well as some older countries. Thus, whilst in Victoria the debt in proportion to each person of the population is 22*l.* 17*s.* 1 $\frac{1}{2}$ *d.*, in the United Kingdom it is 23*l.* 3*s.* 11 $\frac{3}{4}$ *d.*, and in France it is 25*l.* 8*s.* 1 $\frac{1}{4}$ *d.*

Victoria, in proportion to population, is less in debt than any other of the principal Australasian colonies except New South Wales, and in the latter the reason which has been already cited as that which renders a smaller amount of taxation necessary than in the other colonies, namely, that she is rapidly disposing of her public estate and spending the proceeds, operates to obviate the

necessity of her becoming so large a borrower as the rest. Per head of their respective populations, the indebtedness of South Australia is slightly greater, that of Queensland is twice as great, and that of New Zealand is two and a-half times as great as that of Victoria.

The debt of Victoria is about four and a third times the revenue, which is a smaller proportion than obtains in almost any other country sufficiently important to effect loans. The following are the names of most of such countries, with a statement of the number of times the amount of revenue of each country is contained in the amount of its debt. According to the latest returns:—

In Mexico the debt was	21'14	times the revenue.
„ Spain „	18'69	„
„ Portugal „	15'35	„
„ Turkey (before the war) the debt was	11'20	„
„ Greece „	10'96	„
„ United Kingdom „	9'88	„
„ Holland „	8'94	„
„ France „	8'77	„
„ United States „	8'06	„
„ Egypt „	7'32	„
„ Brazil „	6'98	„
„ Italy „	6'72	„
„ Austro Hungary „	5'96	„
„ Queensland „	5'50	„
„ Roumania „	5'44	„
„ Russia (before the war) „	5'22	„
„ New Zealand „	5'22	„
„ Peru „	5'04	„
„ Canada „	4'71	„
„ Tasmania „	4'64	„
„ Belgium „	4'58	„
Whilst the debt of Victoria is only.....	4'36	„

The value of Victorian imports in 1877 amounted to 16,362,304*l.*, that of the exports to 15,157,687*l.* These values are higher than those obtaining in any of the other Australian colonies, or than in any other British possessions except India, Canada, and the United Kingdom itself. They also exceed those of the Argentine Confederation, Chili, Mexico, Denmark, and Greece, and approximate closely to those of Brazil.

Victorian imports in 1877 were of the value of 19*l.* 5*s.* 1*d.*, and Victorian exports were of the value of 17*l.* 16*s.* 8*d.* per head of the population. These proportionate values approximate to those of Belgium, but are higher than those in most of the other principal countries in the world. The following are the figures relating to several of those countries:—

	Imports per Head.			Exports per Head.		
	£	s.	d.	£	s.	d.
Mexico.....	—	12	2	—	10	10
Russia in Europe	1	2	11	—	17	6
Spain	1	5	4	1	8	—
Brazil	1	16	—	1	17	—
Italy	1	18	9	1	13	2
Austro-Hungary	2	7	7	2	5	—
Greece	2	19	—	1	17	—
United States.....	3	2	—	3	5	5
Chili	3	18	7	3	11	10
Sweden and Norway	4	—	1	2	16	4
Argentine Confederation	5	3	4	4	13	2
Germany.....	5	11	1	Not given		
France	5	17	2	5	10	5
Denmark.....	6	14	7	5	—	11
United Kingdom	12	3	6	9	4	11
Belgium	19	18	6	16	5	5
Victoria	19	5	1	17	6	8

About three-fourths of the exports of Victoria are entered as the produce or manufacture of the colony, the remaining fourth consisting of re-exports of imported articles. The *articles of Victorian produce* exported in 1877 amounted in value to 11,269,086*l.*, or to 13*l.* 5*s.* 2½*d.* per head of the population. This proportion is half as high again as the value per head of the *total* exports of the United Kingdom, and is still very much higher than the proportion that the *total* exports bear to each head of the population in all the other countries just named except Belgium.

Four thousand four hundred and eleven vessels, of an aggregate burden of 1,874,985 tons, were entered and cleared at Victorian ports in 1877. The tonnage was greater than that entered and cleared in any former year. In consequence of the large amount of shipping engaged in the coal trade of New South Wales, a few more vessels are entered and cleared in that colony than Victoria, but, with this exception, the shipping entering and leaving Victorian ports is much greater, both in regard to numbers and tonnage, than that entering and leaving the ports of any other colony of the group.

The tonnage of vessels trading to Victoria is greater than that to any other British possession outside of Australia except India, the Straits Settlements, Canada, Gibraltar, Malta, Ceylon, Hong Kong, and the United Kingdom itself.

A very efficient postal system exists in Victoria, and post offices are established throughout the length and breadth of the colony; 948 such institutions existed in 1877, as against 764 five years previously. In the same quinquennial period the number of letters, newspapers and packets despatched and received in a year increased from 21¼ millions to 33¼ millions.

Money order offices in connection with the post office have been established in 246 of the principal centres of population. The system is largely availed of, and is being rapidly extended.

Telegraphic communication exists in Victoria between 206 stations within her own borders. Her lines are connected besides with the lines of New South Wales, and by means of them with Queensland and New Zealand. They are also connected with the lines of South Australia, and by their means with the Eastern Archipelago, Asia, Europe, and America. They are likewise united with a submarine cable to Tasmania. In 1877 the miles of line along which poles extend numbered 2,885, and the miles of wire 5,200. A considerable extension takes place each year.

Victoria, notwithstanding the comparatively small extent of her territory, has made more progress in the construction of railways than any other Australian colony. As many as 950 miles (174 of which had been laid with double lines) were open at the end of 1877, and 193 more miles were in course of being made. Since then considerable further extensions have been authorised by parliament, and some of them are being actively proceeded with.

A large profit attends the working of the Victorian railways. The receipts amount to about double the working expenses, and although the traffic is as yet not fully developed, the excess of receipts over working expenses already amounts to 4·2 per cent. on the moneys borrowed for railway construction.

Both electric telegraphs and railways in Victoria are the property of, and are worked by the State.

Cultivation in Victoria extended over 1,420,502 acres in the season ended with March, 1878, which is fully twice the area which was under tillage ten years previously. The crops raised were as follow:—

	Area.	Produce.
Wheat.....	564,564 acres	7,018,257 bushels
Oats	105,234 "	2,040,486 "
Barley	19,116 "	378,706 "
Potatoes	37,107 "	115,419 tons
Hay	176,951 "	207,251 "
Other tillage	517,530 "	—
Total	1,420,502 "	—

By a carefully prepared estimate made by the Government Statist, it appears that the value of the crops raised in 1877-78 amounted to upwards of 5 $\frac{3}{4}$ millions sterling (5,792,898*l.*).

The live stock in Victoria was as follows in the same year.

All kinds show increase, except the sheep, which, as the result of the dry weather which prevailed throughout Australia, were fewer by 1,160,000 than in the previous year:—

Horses	203,150
Cattle	1,174,176
Sheep	10,114,267
Pigs	183,391

The value of the pastoral produce raised during the year was estimated by the Government Statist to have amounted to 8,652,471*l*.

The chief mineral production of Victoria is, as is well-known, gold. The yield has been much reduced of late years as goldfields have become exhausted, and fresh discoveries of corresponding richness have not been made. But happily the extension of other industries has been such that scarcely any falling off has taken place in the total value of exports. From the first discovery of gold in 1851 to the end of 1877, 47,283,377 ozs., valued at 189,133,508*l*., had been raised, of which 809,653 ozs., valued at 3,238,612*l*., were got during the last-named year.

The estimated total values of agricultural and pastoral produce raised in 1877 have been already quoted. I will, however, repeat them in connection with the value of mining produce:—

	£
Value of agricultural produce.....	5,792,898
„ pastoral „	8,652,471
„ mining „	3,322,264
Total	<u>17,767,633</u>

We have thus in the year 1877 produce amounting in value to upwards of $17\frac{3}{4}$ millions sterling raised from these three industries alone.

I now come to the manufactures of Victoria, which I must notice briefly, although in order to render justice to the subject it would be necessary to devote a whole paper to their consideration. With reference to these, I may observe, that without offering any opinion respecting the wisdom of the policy which has sought to encourage native industry in the colony by the imposition of protective duties, there can be no question that the existence of such imposts has given a stimulus to manufacturing enterprise which has resulted in raising Victoria, as a manufacturing country, to a pre-eminent position amongst the colonies of the Australian group.

The official statistics relating to manufactures differ in principle in Victoria from those of several of the other colonies of the group,

inasmuch as the former include extensive establishments only. Were mere shops at which some manufacturing industry is carried on to be enumerated, as is often the case elsewhere, the returns might be multiplied to an almost indefinite extent, as such establishments abound in every town and village in Victoria.

In 1878 the manufactories and works returned as existing in Victoria, numbered 2,370, being an increase of over 100 per cent. in ten years; the hands employed numbered 32,688, being an increase of more than 130 per cent. in the same period; and the capital invested so far as it is represented by the value of lands,* buildings, machinery and plant, amounted to 6,665,540*l.*, or an increase of 150 per cent. in the same period.

The various establishments may be grouped under the following heads.

Manufactories and works for the production of or for working in:—

	Number.	Hands Employed.	Value of Lands,* Buildings, Machinery and Plant.
			£
Books and stationery.....	57	2,192	338,604
Musical instruments	10	55	10,820
Prints, pictures, &c.	10	40	18,045
Carving, figures, &c.	19	57	17,177
Designs, medals and dies	4	29	6,000
Philosophical instruments, &c....	7	17	5,560
Surgical instruments.....	8	30	6,603
Arms and ammunition	11	93	22,517
Medicines, tools and implements	95	1,961	258,399
Carriages and harness	176	1,916	244,289
Ships and boats	24	236	447,518
Houses, buildings, &c.	31	181	16,794
Furniture	62	853	98,470
Chemicals	40	320	73,837
Textile fabrics	8	736	196,613
Dress	182	6,921	346,442
Fibrous materials	16	461	80,491
Animal food	40	473	72,722
Vegetable food	181	1,452	591,537
Drinks and stimulants	267	2,761	999,612
Animal matters	249	2,829	522,384
Vegetable matters	397	4,062	592,706
Coal.....	16	311	881,059
Stone, clay, earthenware and glass	266	1,686	258,860
Water	3	19	9,940
Gold, silver and precious stones	26	396	66,250
Metals other than gold and silver	165	2,601	482,291
Total	2,370	32,688	6,665,540

* In the case of 266 establishments which stood on crown lands the value of the land was not given.

The educational system of Victoria, the basis of which is that secular instruction shall be provided by the State, without payment for all children whose parents may be willing to accept it, but that whether accepted or not, satisfactory evidence must be produced that all children are educated up to a given standard, has been most successful in its operation, and, for securing the object sought to be attained, it is believed compares favourably with the system adopted in any other country in the world. In 1872, just before the present system came into operation, the number of children returned as attending school was 137,901, whilst in 1877, after the system had been in force for six years, the number had increased to 223,416, or 62 per cent., although during the same period the population of the colony had increased by less than 12 per cent.

It has been officially estimated by the Government Statist that, in 1877, all the children in Victoria between the ages of 6 and 15 except about $7\frac{3}{5}$ per cent., were receiving education during some portion of the year.

It has also been estimated that the children attending school for not less than thirty days in a quarter, amounted in the same year to about 68 per cent. of the numbers on the rolls, and it is believed that in but few countries has so large a proportion of efficient school attendance been obtained.

The census schedule of most of the Australian colonies contains a column for inserting respecting each individual of the population, whether he can read and write, can only read and not write, or whether he is entirely illiterate. At the last census of Victoria, which was taken two years before the present educational system came into force, and when, as it was not compulsory to send children to school, many were neglected, it was found that as many as 846 children in every 1,000 living at the school age could read, that 640 could write, and that only 154 were uninstructed; also that the children of Victoria were, in point of rudimentary instruction, far in advance of those of South Australia, and in a still greater degree of those of Queensland and New South Wales, the last being in this respect behind all the other colonies in the group.

In view of the success of the present educational system, it may fairly be expected that a still more satisfactory result will be found in the returns of the next Victorian census to be taken in 1881.

Whilst advancement is shown in so many directions, it is satisfactory to find that crime in Victoria has steadily decreased. In 1867 957 persons were committed for trial, whilst only 688 were so committed in 1872, and no more than 594 in 1877. As the population had largely increased between the different periods named, the actual diminution of crime was even greater than that indicated by the figures.

Crime, as instanced by the records of summary convictions and commitments for trial, is less rife in Victoria than in any other of the Australian colonies. Thus, of summary convictions, there were in 1876 per 1,000 of the living population:—

In Western Australia	216'43
„ Tasmania	68'93
„ New South Wales	49'18
„ New Zealand.....	41'55
„ South Australia	36'36
„ Queensland	33'26
And in Victoria only.....	33'11

Of commitments for trial there were in the same period per 10,000 persons living:—

In Western Australia	35'17
„ New South Wales	22'50
„ Queensland	15'47
„ South Australia	10'96
„ New Zealand	10'68
„ Tasmania.....	9'18
And in Victoria only	8'19

It now only remains for me to say a few words respecting the land available for settlement. The whole area of Victoria is 88,198 square miles, or 56,446,720 acres. This is being rapidly parted with to selectors, who are at liberty to take up any portion not exceeding 320 acres, and to acquire the same in fee simple by means of easy annual payments, accompanied with the fulfilment of certain conditions of residence and improvement.

The total extent sold and selected to the end of 1877 was 18,206,165 acres, and of the residue, if an ample allowance be made for lands at present reserved for roads, the sites of towns, State forests, and for auriferous and pastoral purposes, also for that covered by mountain ranges, lakes, and lagoons, there remains an area of 12,000,000 acres of country in every way suitable for occupation lying open to the selector.

By this paper I believe I have shown:—

1. That, although the Colony of Victoria occupies no more than a thirty-fourth part of the Australian continent, its attractiveness is such that it contains 44 per cent. of the inhabitants of that continent.

2. That the population of Victoria in the last seven years and three-quarters has increased 20 per cent.

3. That the revenue of Victoria now exceeds $4\frac{1}{2}$ millions sterling, which is much in excess of that of any other Australian colony except New South Wales, which colony raises 70 per cent.

of its revenue from land sales, whereas only 17 per cent. of the Victorian revenue is derived from a similar source.

4. That the revenue of Victoria is greater than that of any British colony outside of Australia except Canada, and that in Canada, with a population four times and an area forty times greater, the revenue only exceeds that of Victoria by an eighth.

5. That in the Cape of Good Hope, which has an equal population to, and two and a-half times the area of, Victoria, the revenue is only about half that of Victoria.

6. That the revenue of Victoria for years past has amounted to over 5*l.* per head, and that no country in the world out of Australia can show anything like such a result.

7. That the taxation of Victoria is per head about equal to that of the United Kingdom, and is lower than that of France ; that it is also lighter than that of any other Australian colony, except New South Wales, which colony appears to prefer to meet a large portion of its current expenses by the proceeds of the sale of the public estate rather than by taxation.

8. That, per head of the population, the public indebtedness of Victoria is less than that of the United Kingdom, France, South Australia, Queensland, or New Zealand.

9. That, in proportion to revenue, the public indebtedness of Victoria is less than that of almost any other country in the world sufficiently important to raise loans.

10. That the value of the imports and exports is higher in Victoria than in any of the other Australian colonies or than in several European and American countries.

11. That, per head, the value of imports and exports is higher in Victoria than in sixteen of the principal countries of the world.

12. That the exports of *Victorian produce* are, per head, in excess of the *total* exports of fifteen of those countries out of the sixteen.

13. That the tonnage of vessels entering and leaving Victorian ports was greater in 1877 (that being the last year respecting which the information is at hand) than in any previous year.

14. That, except Great Britain, India, one Australian colony, and six colonies out of Australia, a larger amount of shipping trades to Victoria than to any other British possession.

15. That post and money order offices have been established and telegraph lines have been constructed throughout the length and breadth of Victoria, and the systems are being largely extended.

16. That notwithstanding the comparatively small extent of her territory, Victoria has made more progress in the construction of railways than any other Australian colony, and that fresh lines and extensions of old ones are being rapidly proceeded with.

17. That the traffic receipts of the Victorian railways exceed the working expenses by about 50 per cent. and the excess of receipts over working expenses already amounts to over 4 per cent. on the moneys borrowed for railway construction.

18. That during the last ten years the land under tillage in Victoria has fully doubled.

19. That, with the exception of sheep, of which in consequence of drought the numbers were slightly less in 1878 than in 1877, all descriptions of live stock increased considerably during the past year.

20. That although the gold yield has fallen off considerably in consequence of the exhaustion of gold fields, the extension of other industries has been such that the total value of Victorian exports is scarcely affected.

21. That the estimated value of agricultural, pastoral and mining produce in Victoria during 1877 amounted to upwards of $17\frac{3}{4}$ millions sterling.

22. That as a manufacturing country Victoria is far in advance of the other Australian colonies.

23. That in the last ten years the number of manufactories in Victoria increased 100 per cent., the hands employed in manufactories increased 130 per cent., and the capital invested in manufactories increased 150 per cent.

24. That the educational system of Victoria is most successful, and that few other countries can boast of so large a proportion of efficient school attendance.

25. That, at the last census, the proportion of children able to read and write in Victoria was greater than that obtaining in any other Australian colony.

26. That crime in Victoria has been steadily decreasing for years past, and, in proportion to population, is less rife than in any other Australian colony.

27. That of the public estate, upwards of 12 million acres are now available for selection in blocks not exceeding 320 acres and subsequent purchase by means of payments extending over a series of years.

APPENDIX.

TABLE I.—*Victoria. Population, Births, Deaths, Marriages, Arrivals, Departures in each Fifth Year from 1837 to 1877.*

Years.	Population (on 31st December).	Births.	Deaths.	Marriages.	Immigrants.	Emigrants.
1837*....	1,264	7	1	1	740	—
'42	23,799	1,025	413	514	4,136	1,964
'47	42,936	1,661	361	337	4,568	1,540
'52†....	168,321	3,756	2,105	1,958	94,664	31,038
'57	463,135	17,384	7,449	4,524	74,255	20,471
'62	554,358	24,391	10,080	4,525	37,836	38,203
'67	651,571	25,608	11,733	4,490	27,242	25,142
'72	770,727	27,361	10,831	4,791	27,047	25,295
'77	860,787	26,010	12,776	5,103	41,196	33,943

* Colonisation commenced towards the end of 1835. Little progress was however made until after Sir Thomas Mitchell's explorations, which took place in the following year.

† Victoria was separated from New South Wales, and became an independent colony on the 1st July, 1851. The first gold discoveries had been made a few months previously.

TABLE II.—*Victoria. Revenue, Expenditure, Imports, Exports, Shipping in each Fifth Year from 1837 to 1877.*

Years.	Revenue.*	Expenditure.*	Imports.	Exports.	Shipping, Inwards and Outwards.	
					Vessels.	Tons.
1837	£ 6,071	£ 5,872	£ 115,379	£ 12,178	280	26,178
'42	87,296	124,631	277,427	198,783	462	78,025
'47	138,293	73,460	437,696	668,511	848	96,519
'52	1,634,448	978,922	4,069,742	7,451,549	3,132	758,512
'57	3,328,303	2,968,658	17,256,209	15,079,512	4,397	1,379,090
'62	3,269,079	3,039,497	13,487,787	13,039,422	3,481	1,138,080
'67	3,216,317	3,241,818	11,674,080	12,724,427	3,802	1,210,261
'72	3,734,422	3,659,534	13,691,322	13,871,195	4,338	1,360,762
'77	4,723,877	4,358,096	16,362,304	15,157,687	4,411	1,874,985

* The revenue and expenditure are for the year ended 31st December until 1867, and for the year ended 30th June at the two subsequent periods.

TABLE III.—*Victoria. Imports 1867, 1872, and 1877, Sixty of the Principal Articles being named.*

Articles.	1867.	1872.	1877.
	£	£	£
Apparel and slops	373,825	289,189	346,682
Bags and sacks	77,067	115,370	92,735
Beer, cider and perry	297,103	136,869	201,189
Books	72,014	94,473	170,918
Boots and shoes	256,524	245,838	217,503
Butter and cheese	64,286	6,855	5,793
Candles	203,821	75,797	48,198
Carpeting and druggeting	35,613	36,725	57,351
Coal	145,075	184,374	325,367
Coffee	61,205	43,655	74,804
Cottons	458,644	636,441	766,222
Cutlery	19,156	44,741	43,557
Drapery	170,209	109,586	*
Drugs and chemicals.....	76,050	69,175	54,191
Earthenware, brownware and } chinaware	35,138	45,682	73,104
Fancy goods	18,397	27,494	51,435
Fish.....	113,026	78,652	158,924
Flour and biscuit	43,417	21,395	3,509
Fruit (including currants and raisins)	122,708	117,305	184,043
Furniture and upholstery	38,745	25,223	42,028
Glass and glassware	61,721	50,135	104,673
Gloves.....	50,302	48,220	67,332
Gold (exclusive of specie)	1,691†	986,494	433,961
Grain, wheat	65,941	157,647	20,861
„ oats	27,341	119,220	129,876
„ other (including rice)	416,443	377,215	261,226
Haberdashery.....	104,653	201,854	239,156
Hardware and ironmongery.....	97,405	61,337	115,635
Hats, caps, and bonnets.....	128,452	99,325	138,222
Hides, skins, and pelts	6,821	69,553	129,045
Hops	67,692	72,408	65,021
Hosiery	123,193	109,421	104,779

* In 1877 articles formerly comprised under this head were distributed under other headings.

† In 1867 gold from the adjacent colonies was transhipped under bond, and therefore did not appear in the returns of imports and exports.

TABLE III.—*Victoria. Imports 1867, 1872, and 1877.—Contd.*

Articles.	1867.	1872.	1877.
	£	£	£
Iron and steel (exclusive of railway } rails, &c.)	317,901	413,362	712,041
Jewellery.....	34,855	50,291	48,702
Leather, leatherware, leather cloth	35,736	85,433	141,933
Linen, piece goods.....	54,437	43,245	37,493
Live stock	590,170	758,858	1,024,390
Machinery	68,077	46,902	100,467
Matches and vestas	45,246	41,642	45,544
Meats—fresh, preserved and salted....	96,907	7,882	12,700
Millinery.....	100,096	36,431	12,197
Musical instruments	21,475	40,148	101,073
Nails and screws	50,567	56,475	64,574
Oil	282,672	207,939	241,001
Oilmen's stores	69,552	17,431	18,101
Opium	88,392	87,851	79,149
Paints and colours.....	19,671	37,049	60,486
Paper (including paper bags)	122,518	159,609	175,083
Silks.....	119,974	273,378	258,969
Specie.....	1,081,760	268,865	53,710
Spirits	420,665	365,865	579,984
Stationery	83,515	58,094	61,461
Sugar and molasses	866,006	1,065,275	769,032
Tea	516,344	534,648	599,725
Timber	217,744	301,831	536,761
Tobacco, cigars and snuff	297,480	280,473	384,219
Tools and utensils	43,776	76,785	41,495
Watches, clocks and watchmakers' } materials.....	14,029	32,033	85,225
Wine	163,154	111,058	168,985
Wool	170,321*	1,215,094	2,030,129
Woollens and woollen piece goods	948,548	805,130	917,793
Other articles	898,814	1,454,577	2,212,542
Total	11,674,080	13,691,322	16,362,304

* Not including the value of wool imported into Victoria across the Murray.

TABLE IV.—*Victoria. Exports 1867, 1872, and 1877, Forty Articles being named.*

Articles.	1867.	1872.	1877.
	£	£	£
Antimony, ore, regulus, &c.....	4,972	13,883	47,042
Apparel and slops	77,074	127,366	216,482
Bark	7,021	20,559	51,394
Bones and bone dust	8,663	21,232	29,535
Books	25,656	16,119	38,325
Boots and shoes	39,446	50,618	104,207
Butter and cheese	15,997	10,373	36,977
Candles	23,369	18,406	31,889
Coffee	34,937	21,972	25,112
Drapery	421,672	177,081	*
Flour and biscuit	78,474	31,596	141,142
Gold (exclusive of specie)	5,738,993	5,197,340	2,090,112
Grain, wheat	31,856	30,374	24,600
„ oats	3,923	1,410	34,805
„ other (including rice)	42,623	59,084	86,694
Hardware and ironmongery	48,792	71,332	45,853
Hay and chaff	7,782	7,987	38,838
Hides	26,775	4,951	2,997
Horns and hoofs	434	2,397	2,651
Leather and leatherware	73,905	218,101	212,066
Live stock	99,499	75,635	317,660
Machinery	17,377	41,694	90,262
Meats, fresh and preserved	5,864	257,855	123,782
„ salted	43,835	13,788	10,035
Oil	64,816	67,927	98,944
Potatoes	38,938	43,526	77,840
Soap	11,417	5,910	7,852
Skins and pelts	4,683	44,218	32,564
Specie, gold †	671,936	668,191	2,814,907
„ silver	1,082	18,480	5,500
Spirits	108,200	103,665	138,969
Stationery	33,355	38,070	29,458
Sugar	110,262	189,212	289,211
Tallow	34,968	353,358	90,455
Tea	185,515	190,872	282,571
Tin, tin ore, and black sand	9,390	27,693	8,538
Tobacco, cigars and snuff	129,488	153,929	235,531
Wine	51,653	48,038	68,192
Wool ‡	3,824,956	4,651,665	5,670,871
Woollens, and woollen piece goods	31,923	53,792	110,286
Other articles	532,906	721,546	1,393,538
Total	12,724,427	13,871,195	15,157,687

* In 1877 articles formerly comprised under this head were distributed under other headings.

† A mint was established in Melbourne in 1872, and 740,000 sovereigns were coined in that year. From the founding of the mint to the end of 1877, gold coin to the value of 8,617,000*l.* was issued therefrom; that issued in 1877 being of the value of 1,527,000*l.*

‡ Wool from the adjacent colonies is included in the export returns of all the years, such of it as came overland was not included in the import returns until 1872.

TABLE V.—*Victoria. Land in Cultivation and Live Stock in each Fifth Year, from 1837 to 1877.*

Year.	Acres under Tillage.	Horses.	Cattle.	Sheep.
1837	100	299	6,713	176,139
'42	8,124	4,065	100,792	1,404,333
'47	36,290	13,292	322,824	4,164,203
'52	36,771	34,021	431,380	6,551,506
'57	237,729	55,683	614,537	4,766,022
'62	465,430	86,067	576,601	6,764,851
'67	631,207	131,148	650,592	9,532,811
'72	963,091	185,796	812,289	10,575,219
'77	1,420,502	203,150	1,174,176	10,114,267

TABLE VI.—*Victoria. Acreage under, and Produce of Wheat, Oats, Potatoes, and Hay, in each Fifth Year, from 1837 to 1877.*

Years.	Wheat.		Oats.		Potatoes.		Hay.	
	Acres.	Bushels.	Acres.	Bushels.	Acres.	Tons.	Acres.	Tons.
1837	—	—	—	—	—	—	—	—
'42	2,432	55,360	2,410	66,100	1,419	5,996	850	2,300
'47	17,679	349,730	7,173	207,385	2,639	7,255	5,074	9,891
'52	16,823	498,704	2,947	96,980	1,978	4,512	14,101	21,287
'57	87,230	1,808,439	40,222	1,249,800	20,698	51,116	75,536	137,476
'62	162,009	3,008,487	108,195	2,504,301	24,821	50,597	101,639	110,680
'67	216,989	3,411,663	125,345	2,333,472	35,831	117,787	108,373	140,592
'72	326,564	5,391,104	125,505	2,454,225	38,517	132,997	121,375	159,964
'77	564,564	7,018,257	105,234	2,040,486	37,107	115,419	176,951	207,251

TABLE VII.—*Victoria. Average Produce per Acre of Wheat, Oats, Barley, Potatoes, and Hay in each Year, from 1867 to 1877.*

Years.	Average Produce per Acre of.				
	Wheat.	Oats.	Barley.	Potatoes.	Hay.
1867	15'72	18'61	20'32	3'29	1'30
'68	16'28	19'65	15'23	2'21	1'09
'69	19'75	25'98	24'55	3'09	1'60
'70	10'10	14'98	12'26	3'27	1'13
'71	13'45	18'76	20'00	3'22	1'40
'72	16'51	19'55	20'86	3'45	1'32
'73	13'58	15'69	19'84	2'86	1'27
'74	14'57	18'46	21'01	3'53	1'32
'75	15'49	21'92	22'20	3'37	1'33
'76	13'15	19'91	21'18	3'31	1'22
'77	12'41	19'39	19'81	3'11	1'17
Average of 11 years	14'39	19'39	20'12	3'16	1'28

TABLE VIII.—*Victoria. Average Rates of Wages,* 1867, 1872, and 1877.*

Description of Labour.	1867.	1872.	1877.
<i>Agricultural Labour—</i>			
Farm labourers, per week, with rations	13s. to 15s.	12s. to 20s.	15s. to 20s.
Ploughmen " " "	17s. " 20s.	15s. " 20s.	18s. " 25s.
Reapers,† per acre " "	12s. " 15s.	12s. " 15s.	10s. " 15s.
Mowers† " " "	4s. " 5s.	3s. " 5s.	4s. " 7s.
Threshers,† per bushel " "	4d. " 6d.	4d. " 6d.	4d. " 9d.
<i>Pastoral Labour—</i>			
Shepherds, per annum, with rations	30l. to 40l.	30l. to 45l.	25l. to 50l.
Stockkeepers " "	50l. " 60l.	30l. " 50l.	35l. " 75l.
Hutkeepers " " "	22l.	25l. " 30l.	20l. " 40l.
Station labourers, per week " "	12s. to 20s.	15s. " 20s.	15s. " 20s.
Sheepwashers " "	12s. " 15s.	15s. " 25s.	15s. " 30s.
Shearers, per 100 sheep sheared	14s. " 16s.	12s. " 15s.	12s. " 15s.
<i>Artisan Labour—†</i>			
Masons, per day, without rations	8s. to 10s.	10s. to 11s.	10s.
Plasterers " "	8s. " 10s.	10s. " 11s.	10s.
Bricklayers " " "	8s. " 10s.	10s.	10s.
Carpenters " " "	8s. " 10s.	8s. to 9s.	10s.
Blacksmiths " " "	8s. " 10s.	10s. " 12s.	10s. to 13s.
<i>Servants, Males and Married Couples—</i>			
Married couples, without family, per annum, with board and lodging	45l. to 60l.	50l. to 80l.	50l. to 80l.
Married couples, with family, per annum, with board and lodging	35l. " 45l.	40l. " 50l.	40l. " 50l.
Men cooks on farms and stations, per annum, with board and lodging	40l. " 60l.	40l. " 60l.	50l.
Grooms, per annum, with board and lodging	30l. " 55l.	40l. " 50l.	40l. to 50l.
Gardeners, per week, with board and lodging	20s. " 28s.	20s. " 25s.	20s. " 25s.
<i>Servants—Females—</i>			
Cooks, per annum, with board and lodging	25l. to 30l.	35l. to 52l.	35l. to 60l.
Laundresses " "	25l. " 30l.	30l. " 40l.	30l. " 45l.
General servants " "	25l. " 30l.	25l. " 35l.	25l. " 40l.
Housemaids " "	25l. " 30l.	25l. " 35l.	25l. " 36l.
Nursemaids " "	10l. " 20l.	20l. " 35l.	25l. " 35l.
<i>Miscellaneous Labour—</i>			
General labourers,† per day, without rations	6s. to 7s.	5s. to 7s.	6s. to 7s.
Stonebreakers, per cubic yard, without rations	2s. 6d. " 3s. 6d.	2s. to 3s. 6d.	2l. " 3s.
Seamen, per month, with rations	4l. " 5l.	5l. to 6l.	5l. " 6l.
Miners, per week, without rations	2l. 5s. to 3l.	2l. 5s. to 3l.	2l. 5s. to 3l.

* The rates of wages given are those prevailing in the metropolis. The wages in country districts are generally somewhat higher.

† The reaping, mowing, and threshing, has of late years been to a large extent done by machinery.

‡ Throughout Victoria the recognised working day for artisans and labourers is eight hours.

TABLE IX.—Victoria. Average Prices* 1867, 1872, and 1877.

Articles.	1867.	1872.	1877.
<i>Agricultural Produce—</i>			
Wheat per bush.	4s. 6d. to 7s.	4s. to 7s. 4d.	5s. to 7s. 6d.
Barley "	3s. to 6s.	2s. 8d. to 7s.	3s. to 5s. 6d.
Oats "	2s. 7d. ,, 3s. 9d.	2s. 9d. to 3s. 7d.	3s. to 5s.
Maize "	2s. 11s. to 4s.	2s. 11½d. to 4s.	3s. 10d. to 6s.
Bran "	10d. to 1s. 6d.	10½d. to 1s. 5½d.	1s. 2d. to 1s. 5d.
Hay per ton	3l. 10s. to 9l.	3l. 5s. to 4l. 5s.	3l. 5s. to 7l. 10s.
Flour, first quality "	11l. to 18l.	12l. 15s. to 16l. 10s.	11l. 12s. 6d. to 16l. 5s.
Bread..... p. 4lb. loaf	5d. to 9d.	5½d. to 8d.	6½d. to 9d.
<i>Grazing Produce—</i>			
Horses, draught each	10l. to 37l.	10l. to 30l.	16l. to 49l.
„ saddle and harness .. "	3l. ,, 25l.	6l. to 50l.	6l. to 63l.
Cattle, fat "	3l. ,, 10l.	4l. 10s. to 13l. 10s.	5l. 10s. to 19l. 10s.
Milch cows "	3l. ,, 12l.	4l. to 8l. 5s.	4l. to 13l.
Sheep, fat "	5s. ,, 18s.	5s. 6d. to 1l. 1s.	3s. to 28s.
Lambs „ "	3s. ,, 14s.	4s. 9d. to 13s.	2s. to 11s.
Butchers' meat, retail, beef, per lb.	2d. ,, 7d.	3½d. ,, 7d.	3d. to 9d.
„ mutton „	1½d. to 6d.	1½d. ,, 5d.	1½d. to 5d.
„ veal „	6d. ,, 7d.	5d. ,, 6d.	5d. to 7d.
„ pork „	9d.	6d. ,, 9d.	8d. to 10d.
„ lamb, p. qr.	2s. 6d. to 4s.	2s. to 2s. 6d.	2s. to 2s. 6d.
<i>Dairy Produce—</i>			
Butter, fresh per lb.	8d. to 1s. 8d.	5d. to 1s. 6d.	9d. to 2s.
Cheese, colonial, retail .. "	1s. ,, 1s. 8d.	4d. to 7d.	8d. to 1s. 2d.
„ imported wholesale .. "	1s. ,, 1s. 2d.	8½d. to 1s. 1d.	1s. 2d. to 1s. 3d.
Milk pr. qt.	6d.	6d.	4d. to 5d.
<i>Farm-yard Produce—</i>			
Geese..... per couple	8s. to 14s.	7s. to 11s.	8s. to 10s.
Ducks "	5s. ,, 8s.	4s. to 6s.	5s. to 7d.
Fowls "	3s. to 6s. 6d.	3s. 6d. to 5s.	4s. to 6s. 6d.
Rabbits "	2s. to 5s.	1s. 6d. to 3s.	1s. to 2s.
Pigeons "	1s. 6d. to 3s.	1s. 6d. to 2s. 6d.	1s. 6d. to 3s.
Turkeys..... each.	6s. to 12s. 6d.	5s. to 10s.	5s. to 11s. 6d.
Sucking pigs "	10s. to 16s.	6s. to 12s.	10s. to 16s.
Bacon..... per lb.	10d. to 1s. 4d.	11d. to 1s. 2d.	10d. to 1s.
Ham "	1s. to 1s. 6d.	1s. 1d. to 1s. 3d.	1s. 1d. to 1s. 3d.
Eggs per doz.	10d. to 2s. 8d.	1s. 3d. to 2s. 2d.	10d. to 2s. 6d.
<i>Garden Produce—</i>			
Potatoes, wholesale per ton.	2l. 10s. to 4l.	1l. 10s. to 7l.	3l. to 3l. 10s.
„ retail „ lb.	½d. to 1¼d.	¾d. to 1d.	½d. to 1d.
Onions, dried „ cwt.	2s. 6d. to 54s.	1s. 6d. to 18s.	6s. to 20s.
Carrots { per doz. } { bunches }	4d. to 1s.	6d. to 8d.	6d. to 9d.

* The prices given are those prevailing in the metropolis. In country districts the cost of groceries, tobacco, wine, coal, &c., is naturally higher, and that of agricultural and grazing produce, firewood, &c., naturally lower than in Melbourne.

TABLE IX.—Victoria. Average Prices—Contd.

Articles.	1867.	1872.	1877.
<i>Garden Produce—Contd.</i>			
Turnips { per doz. bunches }	4d. to 2s. 6d.	4d. to 1s. 6d.	4d. to 1s.
Radishes { " }	4d. to 8d.	4d. to 6d.	4d. to 8d.
Cabbages per doz.	6d. to 7s.	6d. „ 8s.	6d. to 4d.
Cauliflowers „	1s. 6d. to 8s.	9d. „ 5s.	6d. to 4s.
Lettuces „	3d. to 1s. 8d.	4d. „ 9d.	3d. to 1s.
Green peas per lb.	1d. to 4d.	1½d. „ 3½d.	¾d. to 3½d.
<i>Miscellaneous Articles—</i>			
Tea (duty paid)* per lb.	6d. to 3s. 3d.	8d. to 2s. 7d.	8d. to 2s. 6d.
Coffee (in bond)* „	8d. to 10½d.	7d. to 10½d.	11d. to 1s. 3d.
Sugar (duty paid)† per ton	23l. 10s. to 50l.	24l. to 52l.	30l. to 48l.
Rice „	18l. to 30l.	16l. 10s. to 27l.	14l. to 26l.
Tobacco (in bond)‡ per lb.	4d. to 2s. 6d.	8d. to 1s. 8d.	7d. to 3s. 6d.
Soap, colonial per ton	29l. to 35l.	29l.	20l. to 31l.
Candles, tallow per lb.	6d.	4½d. to 4½d.	4d. to 5½d.
„ sperm „	11d. to 1s. 5d.	11½d. to 1s. —½d.	8d. to 1s. 3d.
Salt per ton	4l. 5s. to 6l.	3l. 15s. to 5l. 10s.	3l. 10d. to 8l.
Coals „	24s. to 27s. 6d.	20s. to 50s.	31s. to 38s.
Firewood „	7s. to 12s.	12s. to 20s.	11s. to 18s.
<i>Wines, Spirits, &c.—</i>			
Ale (duty paid)§ per hhd.	6l. to 9l.	7l. 10s. to 10l.	5l. 10s. to 9l. 10s.
„ per doz.	6s. 6d. to 10s. 3d.	8s. 6d. to 12s.	7s. to 11s. 6d.
Porter „ per hhd.	4l. to 7l.	5l. 5s. to 6l.	5l. 10s. to 7l. 5s.
„ per doz.	7s. to 10s. 6d.	7s. 6d. to 12s. 3d.	7s. 6d. to 11s.
Brandy (in bond)|| ..... per gall.	5s. to 7s.	4s. 3d. to 7s.	4s. 9d. to 12s. 6d.
Rum „ „	3s. to 3s. 9d.	2s. 10½d. to 4s.	2s. 3d. to 4s. 1¼d.
Whisky „ „	4s. to 6s.	3s. 6d. to 6s.	3s. 6d. to 9s.
Hollands „ „	1s. 10½d. to 2s. 7d.	2s. 9d. to 4s. 6d.	2s. 6d. to 4s.
Port wine¶ per pipe	20l. to 100l.	20l. to 100l.	16l. to 100l.
„ (duty paid) per doz.	24s. to 50s.	24s. to 50s.	24s. to 50s.
Sherry (in bond) per butt	20l. to 120l.	20l. to 120l.	20l. to 135l.
„ (duty paid)..... per doz.	15s. to 60s.	20s. to 80s.	28s. to 80s.
Claret „ „	30s. to 60s.	11s. 6d. to 5l.	10s. 9d. to 85s.
Champagne „ „	30s. to 80s.	30s. to 80s.	25s. to 80s.

* The duty on tea and coffee is 3d. per pound.

† „ sugar is 3s. per cwt.

‡ „ tobacco is 2s. per lb.

§ „ ale and porter is 9d. per gallon.

|| „ proof spirits is 10s. „

¶ „ sparkling wine is 6s., and on other wine 4s. per gallon.

TABLE X.—*Statistics of Australasia, 1877.*

Name of Colony.	Area.	Population on 31st December.	Births.	Deaths.
	Square miles.			
Victoria	88,198	860,787	26,010	12,776
New South Wales	310,938	662,212	23,851	9,869
Queensland	669,520	203,084	7,169	3,373
South Australia	903,690	236,864	8,640	3,235
Western Australia	1,000,000*	27,838	912	433
Total	2,972,346	1,990,785	66,582	29,686
Tasmania	26,215	107,104	3,211	2,038
New Zealand	105,342	417,622†	16,856	4,685
Grand Total	3,103,903	2,515,511	86,649	36,409

Name of Colony.	Marriages.	Arrivals.‡	Departures.‡	Imports.	Exports.
				£	£
Victoria	5,103	41,196	33,943	16,362,304	15,157,687
New South Wales	4,994	38,628	20,174	14,606,594	13,125,819
Queensland	1,477	22,596	10,408	4,068,682	4,361,275
South Australia	2,002	14,061	8,367	4,625,511	4,626,531
Western Australia	176	613	575	362,707	373,352
Total	13,752	117,094	73,467	40,025,798	37,644,664
Tasmania	828	9,717	9,270	1,308,671	1,416,975
New Zealand	3,115	12,987	6,611	6,973,418	6,327,472
Grand Total	17,695	139,798	89,348	48,307,887	45,389,111

* This is inclusive of islands. Without islands the estimated area of Western Australia is 978,299 square miles.

† The Maori population is not included.

‡ The arrivals and departures given are those by sea. No official account is, or can be, taken of the number of persons going overland from one colony to another.

TABLE X.—*Statistics of Australasia, 1877—Contd.*

Name of Colony.	Revenue.		Expenditure.	Public Debt on 31st December.
	Total.	Proportion Raised by Taxation.*		
	£	£	£	£
Victoria	4,723,877	1,770,685	4,358,096	17,018,913
New South Wales	5,748,245	1,235,021	4,627,979	11,724,419
Queensland	1,436,582	609,861	1,382,806	7,685,350
South Australia	1,441,401	499,885	1,443,653	4,737,200
Western Australia	165,412	81,286	182,959	161,000
Total	13,515,517	4,196,738	11,995,493	41,326,882
Tasmania	361,771	236,777	352,564	1,589,705
New Zealand	3,916,023	1,343,944	3,822,426	20,691,111
Grand Total	17,793,311	5,777,459	16,170,483	63,607,698

Name of Colony.	Railways Open on 31st December.	Land in Cultivation.	Horses.	Cattle.	Sheep.
	Miles.	Acres.			
Victoria	1,143†	1,420,502	203,150	1,174,176	10,114,267
New South Wales	861	546,556	328,150	2,746,385	20,962,244
Queensland	525	105,049	140,174	2,299,582	6,272,766
South Australia	732	1,828,115	110,684	230,679	6,098,359
Western Australia	93	50,591	30,691	52,057	797,156
Total	3,354	3,950,813	812,849	6,502,879	44,244,792
Tasmania	173	348,841	22,195	126,882	1,818,125
New Zealand	1,173	959,528	99,859	494,917	11,704,853
Grand Total	4,700	5,259,182	934,903	7,124,678	57,767,770

* The amounts in this column are made up of customs duties exclusive of duties on the export of gold, drawbacks, &c.; also of excise duties, including licences imposed for revenue purposes; stamps, other than those for fees of office; legacy succession and probate duties, property and income taxes; and any other impost payable to the general Government, levied distinctly as a tax; but excluding fees, licences, and charges for special services rendered.

† Including 174 miles of double, and 969 miles of single line.

DISCUSSION *on* MR. HAYTER'S PAPER.

PROFESSOR JEVONS having asked whether the amount put down to railways was gross or net receipts, Mr. Hayter said it was the gross.

MR. JOHN COLES pointed out that in a colony like Victoria a large proportion of the population were adults, who were able in agriculture and all other matters to show important results during the present generation, and as the colony grew older they would not compare so favourably with Canada and other older colonies. The population of Ceylon was made up more of large coloured populations. There was another point. Those who were now so liberally lending their capital to Victoria, were all asking whether it was possible that the government machinery there could be got into workable shape—whether everything was to work well in Victoria except the government.

MR. R. H. PRANCE said he did not wish in any way to speak upon political matters, although, perhaps, he might feel very strongly on them. He was deeply interested in all the colonies of Great Britain as related to the question of Great Britain as a nation, and was a member of the Royal Colonial Institute. The question as regards the colonies was, were they to be copies of Great Britain or not? He hoped and believed they were. He would prefer New South Wales to Victoria, because in the former colony he would be certain of a free trade and liberal government, whereas in Victoria the government was actuated by the principles and practices of the trades' unions, if he might be allowed to use the expression. Trade unionism was the bane of Great Britain, and it would be the bane of Victoria. He asked why Victoria had to pay $4\frac{1}{2}$ per cent. for its money, whereas New South Wales 4 per cent. bonds are 99 @ 100 in the London market, though it is well known that a loan of 3 millions may be expected to be put on the market at any time the agents for the colony think fit? Why, simply because Victoria was not a free trade colony, and a British subject who went out there knew he would not have the same security for his capital as he would have in Sydney. He should like the author to answer that one point.

The PRESIDENT said he would say a few words at once upon the paper which had been read, as he had another engagement elsewhere, which would compel him to vacate the chair before the close of the discussion. He was sure he expressed the opinions of all present when he said that they had listened with great pleasure and interest to the paper that had been read. He thought he had detected throughout the paper a kind of wholesome jealousy of the colony of New South Wales. He should have been glad therefore if the

author had been able to give more full data, especially in regard to the question of manufactures and free trade, which would enable them to compare the condition of the two colonies. He had been in the belief that New South Wales flourished more under free trade than Victoria under the protective system, but unfortunately there were not the data from which the balance could be drawn. In reference to another part of the paper it appeared to him (Mr. Shaw Lefevre) that, although the progress of Victoria had been very great during the last few years, some facts the author had brought forward tended to show that such great progress must not be looked to in the future. In the first place the production of gold had fallen off very seriously. During the past year it only amounted in value to 3 million pounds, whereas within the last twenty years 180 millions of gold had been produced from that one colony, showing that not many years ago the average production must have been very much greater than it was now. There was another striking feature, namely, the very small average production of corn and wheat. There was a total of half a million acres under wheat, and the production from that was an average of about 14 bushels per acre, which was not a large average compared even with new countries, and if this were compared with New Zealand the production per acre was very much less, because, if he recollected rightly, New Zealand produced something like 28 bushels per acre. If Victoria was not able to produce a higher ratio than that no great amount of agricultural productions could be looked forward to in that country. No doubt only a small proportion of the land was as yet cultivated. Eighteen million acres of land had been sold and selected, and about 12 millions remained; therefore if $1\frac{1}{2}$ million of acres under cultivation were deducted, it appeared that the larger proportion of the acres in Victoria were occupied in the production of cattle and sheep. Some of the statistics brought forward by Mr. Hayter on other points were extremely interesting, especially those relating to education and crime. He was very much astounded to perceive that the average of crime in some of the Australian Colonies was so very high. It had been pointed out that the commitments in Western Australia amounted to 1 in 5 of the population, but he (the President) presumed that that had some reference to the origin of the colony. Indeed, in other colonies the proportion of criminals to the rest of the population was not what one could wish. In Victoria the proportion of crime seemed to be very low, and on the other hand the number of children under education seemed to be very high when compared even with those countries of Europe and America where education was at the highest pitch. That seemed to him to be very great evidence of progress in the Colony of Victoria. He should have liked Mr. Hayter to give a few more data from which an accurate comparison could be drawn between Victoria and New South Wales. New South Wales had a reputation for free trade principles, and the Colony of Victoria had rather a reputation for protection, and it would be very desirable from every point of view, especially from the statistical point of view, that accurate data should be obtained of the products and manufactures of the two colonies, from which

some idea could be gathered as to the relative value of the two systems.

Mr. C. WALFORD said that in listening to the paper one was struck with the important fact that 10,000,000 sheep in the colony would imply a large amount of wool; but he found that there were only eight textile manufactories in the colony. Of course it was well known that a large quantity of wool was exported to Great Britain and other parts of Europe, but he should like to know whether the wool was sent to England, as formerly, or whether it found its way to America or any other country. As much of the wealth of the colony depended upon the production of live stock, he should also like to know whether the recent drought had been a serious drawback to the progress of the colony. To his mind the paper had not cleared up this question. He should also like to know if the Government of the colony or any of the Australian colonies had paid any attention to the collection of statistics bearing upon fires, such as the amount of property burnt and the proportion which might be insured, or otherwise. The only European country whose Government collects such statistics is Russia, and thereby they are enabled to learn whether the people are politically contented or discontented; as also whether there is a condition of commercial prosperity or otherwise in the different provinces observed upon. In America, too, the statistics of fires were being collected for economic reasons. Australia might present differing problems, as influence of climate or building materials upon the number of fires.

Mr. LIONEL L. COHEN said that there were two or three points connected with the paper in which the Society, he thought, would take a greater interest than they would into the consideration whether the one colony or the other was the more prosperous. It was comparatively a small question whether New South Wales or Victoria or Queensland was the wealthiest country, but taking an imperial view of the question, and looking back to the economical discussions that had taken place before the Society within the last two years, it was a matter of importance for them to know what had been the gradual progress of the colony in recent as compared with previous years, or what had been the retrogression in consequence of the introduction of the protective system. In the papers read last year it was pointed out by Mr. Newmarch that a country should take care of its imports, and the exports would take care of themselves. It would be found that in Victoria the imports were in 1877, 19*l.* 5*s.* 1*d.* per head, and the exports 17*l.* 16*s.* 8*d.* per head of the population. It would be interesting to know whether the imports or the exports had increased, and whether the volume of trade had increased by the protective duties to which Victoria had been subjected during the last five years. Those who, like himself, were advocates for unrestricted trade, believing it had brought advantages to this country, were not so pedantic as to believe that every detail of it was of universal and at the same time of inflexible application; but from the restriction on free trade, and looking at the same time on the circumstances of climate, population, and

immigration, he thought it might be shown conclusively that the trade of this colony had not increased to the same extent as that of older countries that had adopted free trade principles. He had studied the paper, and he confessed that he had received no enlightenment on that point. There was no doubt absolute progress in wealth and in trade, but he believed that it would have been doubled—he might say quintupled—if the shackles of trade had been removed, and if one-sided legislation had not led to the forced stimulus of manufactures. There was no doubt that these colonies were gaining great credit for their progress by their economical administration, by the progress of education, and the freedom from crime, as shown in the paper, but he wished to point out that the progress of all those colonies would be much greater if there was not so much jealousy between one colony and another, and so much interference of the littleness of legislation, he would call it, so as to interpose checks between one trade and another. This was no doubt a political question, but political problems, interwoven as they were on these questions with statistics, especially belonged to the province of the Society to elucidate. He asked whether it would not be possible to elicit some statement not only as to the positive, but as to the relative progress of the colony.

THE REV. I. DOXSEY wished to know from Mr. Hayter what means were adopted for the purpose of getting accurate statistics as to the number of horses, cattle, and sheep that were found in the colony, and also what means were taken to ascertain the various kinds of produce. He should also like to know if Mr. Hayter could furnish any information as to the wages of agricultural labourers and mechanics in the colony at the present as compared with former years. There was considerable doubt in many minds as to whether in the early settlement of colonies agricultural should not be more followed than mechanical trades. He further wished to know if any information could be obtained with regard to the present prices of food and clothing, and house rent as compared with former years, because statistics on these points would tend to throw considerable light on many questions that had been raised. The President had called attention to the small produce of wheat in the colony. He (Mr. Doxsey) knew that in some counties in England as much as 40 bushels were raised to the acre. If 40 bushels were raised in Victoria, instead of having 7 million bushels of produce there would be $22\frac{1}{2}$ million bushels. Further investigation upon these points would probably throw some light on the question whether the colony was at a disadvantage by the very great advance in manufactures that had taken place, and whether if more attention were paid to agricultural produce there would not be a very considerable increase in the necessaries of life.

MR. WESTGARTH said that he was an old colonist of Victoria, and it was twenty-two years since he had returned. It was thirty-nine years since he first went out, and Victoria and Melbourne were very different then from what they were now. With regard to the colonial

revenues there was, he thought, some deception in comparing revenues of young colonies with those of old countries. Mr. Hayter himself had given warning as to that. One great colonial revenue item was railways; another great item was land. The proportion of revenue from land in Victoria was 17 per cent. and in New South Wales it had given lately as much as 70 per cent., from a variety of reasons, such as the high price of wool and other products which enabled pastoral occupants to buy the land in New South Wales rather than in other colonies. In this country the purchase of land was between individuals, whereas in Australia it was purchased largely from Government, and if one thing and another of that extraneous kind was struck off, the difference was not so great between the taxation of old countries and the taxation of the colonies. Mr. Hayter had alluded to the debts of the colonies and to the comparatively moderate amount owing by Victoria; but he would remind him that Victoria had not yet done borrowing. Only a few days ago she brought out a loan of 3 millions which was only part of a loan of 5 millions. There was a perfectly loyal feeling as regards debts, and he believed that every colony would pay the last farthing. As to the protection question, Mr. Hayter evidently was fond of protection, and thought it had done good, and quoted a case of the increase of manufactures all over the colonies under the influence of protection. He (Mr. Westgarth) questioned whether in a semi-tropical clime like Victoria it was an advantage to the people to shut them up in manufactories. Again it had been argued that the colonies should be independent of outside people for the principal manufactures. He thought, however, that the argument should be the other way, and that they should depend upon one another. The more dependent they were the more likely were they to have prosperous commerce. Naturally enough the view was taken that protection meant loss. Most of the colonists admitted this, but they held that there was a social advantage in it, but they should be very careful to inquire what the costly social advantage was. With regard to education, he was glad to see how much Victoria had improved in this respect. He had compared Victoria with Canada some years ago, and he found that Western Canada was all but in the position of having actually every child of educational age at school, and he was glad to think that Victoria was almost in the same position.

Mr. MONCRIEFF PAUL said that although not so old a colonist as Mr. Westgarth, he had spent about fifteen years in Victoria and New South Wales, and was exceedingly gratified to hear the subject of the paper so ably and succinctly dealt with by Mr. Hayter. He was glad to find that Mr. Hayter had specially alluded to the land revenue of New South Wales as contrasted with that of Victoria. It was a very easy thing to make a revenue by selling the corpus of an estate. New South Wales continued to sell her corpus, and the amount so realised was treated as annual revenue. It was therefore very easy to bring about the result exhibited in the financial statistics of that colony, as the policy of its Government differed very much from the position assumed in Victoria. In New South Wales

the landowners were different from those of Victoria. In the former colony the land had been acquired in various ways, and was very often purchased there by the pastoral tenants in self defence. Squatters there, who were the pastoral tenants of the Crown, were obliged to buy what might be termed "the eyes of their runs," in order to preserve them from free selection. The squatters had either leased their lands from Government, or had given for the right of run a large premium to previous holders. They were frequently thus compelled to buy great areas of country in order to protect themselves. A large proportion of the Government land was thereby alienated. The money obtained for it went into the Government treasury and appeared as revenue annually. The next point to which he would call attention was the position Victoria occupied in respect of railways, which were now all in the hands of the Government. In the earlier days there were one or two attempts to start railways by private enterprise; these, however, were gradually acquired by the Government, and the last of them, the Melbourne and Hobson's Bay Railway, about which there was a great deal of haggling, eventually passed into Government hands, although it was understood that it might have been obtained on more favourable terms when first offered for sale. It was important to notice this action with respect to railways, because Victoria having laid down her trunk lines, she had been enabled to attract to herself a vast amount of produce, in the export of which she derived certain collateral advantages. Allusion had been made to the small area under cultivation. He did not believe that, taken as a whole, Victoria was an agricultural country—not agricultural in the sense that we in this country understand it, and for this reason: it was more easy to deal with agriculture in a country where there was superabundant moisture to get rid of by drainage than when a country lacked moisture which had to be supplied by irrigation. With regard to the yield of wheat per acre, it was well known that in South Australia it was even less than in Victoria; but there was no finer wheat that came to this or any other market than the wheat of South Australia. It was a mistake to compare New Zealand with South Australia or Victoria in this respect, because the latitude and situation of the two colonies were different. In New Zealand there were 30 bushels of wheat grown to the acre, but this result could not be expected to be obtained in Victoria by any amount of good farming, because there was quite a different country to deal with. With regard to the question of crime, it was very important to notice that amongst the colonies Western Australia and Tasmania stood the highest two on the list; but the obvious reason for that was the origin of the population in these colonies. Victoria was a colony to which convicts were never sent, although they might have come as ticket-of-leave men from Tasmania or Western Australia. Having thus reviewed several points in Mr. Hayter's paper, Mr. Paul proceeded to say that it seemed to him that Mr. Hayter had not given enough prominence to what might be termed the two "backbones" of Victoria. The first of these was wool, and the second gold. Wool growing commenced in 1837, and the gold discoveries in 1851. Sometimes both

those two backbones were active, and sometimes the one was latent and the other active. In 1837 there were only 514 bales of wool exported from Victoria, while in 1876 there were 312,566; so that in the forty years from 1837-76 there was an increase unparalleled in the history of any country. Dividing this period into four decades, the figures for each showed the following results, viz.:—

						Bales.
From 1837 to 1846,	84,975 bales, or an average per annum of					8,497'5
„ '47 „ '56,	524,052	„	„	....		52,405'2
„ '57 „ '66,	908,651	„	„	....		90,865'1
„ '67 „ '76,	2,367,405	„	„	....		236,740'5

During 1877 and 1878, the two years of the fifth decade, on which we have now entered, the exports were respectively 329,791 bales and 298,573 bales.

It would thus be seen that between 1877 and 1878 there was a great decrease, and it was necessary to explain the reason of it. Mr. Hayter had alluded to the drought. The drought in the Australian colonies, though not so much felt in Victoria as in some drier districts, of course had an effect on the export of wool. But there was another feature with regard to the export of wool from Victoria which should be viewed in connection with her trunk system of railways, to which allusion had already been made. From the policy of the Government of Victoria some years ago the squatters were, so to speak, driven across the Murray, and a great many of them took up stations in that part of New South Wales now known as Riverina. At one time they thought of separating themselves from New South Wales, and forming another colony, but as they had no seaboard, they prudently gave up the idea. Their affections lay with Victoria, where they had originally settled, and where they had been trained, and above all things their purse strings were held there, because having received from Victorian merchants advances and support, they were obliged to send their wool for shipment through Victoria, and they did this the more readily as transit facilities were afforded by the establishment of railways to take their wool from Riverina to Victoria. New South Wales was now making advances in this direction, because she was pushing on her railways, and in a year or two it would be found that the increase in the exports of wool from Victoria would not go on in the same ratio; in other words, that the Riverina wool would be shipped at Sydney instead of at Melbourne.

The other backbone was gold. The supply in Victoria was greatly decreasing. As far back as 1867 the average number of miners employed was 65,857, and the yield of gold in that year was 1,493,831 ozs. In 1876 the number of miners was 41,564, and the produce of gold was only 937,260 ozs. In the year 1877 the number of miners was 38,882, and the produce of gold 792,839 ozs., and in 1878 the number of miners was computed at 37,400, with an estimated yield of 753,793 ozs. Taking the Government Mining Department returns, the following results were exhibited:—In 1868 the produce was 1,684,919 ozs. against, in 1878, 755,754 ozs. Of course there was a reason for this. When gold was discovered

there were at the diggings a great many masters, but very few servants, and they all went in a manner scraping up the gold. In other words, there was a great deal of alluvial sinking, but nothing in the shape of mining. Many of the men became dissatisfied, and those who were at first gold diggers subsequently became servants to those who had capital, brains, technical knowledge, and experience to work the mines.

He thus had attempted briefly to supply the details concerning these two products, which he thought Mr. Hayter in his paper had not dealt with so fully as he might have done, possibly from his desire to contribute a *multum in parvo*. In regard to the sheep statistics of the colony, it was necessary to view them in connection with the position of the wool exports already laid down. In 1860 the number was 5,794,127, and in 1866 there were exported 71,393 bales of wool, but in the year 1876 the number of sheep was 11,749,532, while the number of bales of wool exported was 312,566. It would thus be seen that the ratio of increase of sheep had no reference to the increase of wool. Of course as the wool exported must have come from somewhere, and could not have been shorn from Victorian sheep, in this there was proof of what he had previously stated, that there was a transit of wool through Victoria, of which she reaped the benefit in her exports. He thought it was wise in Mr. Hayter, considering the position he held, not to introduce political matters into his paper, and he admired exceedingly his prudence in this respect. He thought, however, Mr. Hayter might have called special attention to one or two salient points in the history of Victoria, such as the discovery of gold in 1851; the giving of a constitution to Victoria in 1856, for which he regretted to say she was not ripe, the result being that very shortly after universal suffrage was established, followed by a series of jumps towards protectionism. A new *régime* had now commenced in Victoria, the effect of which was that New South Wales, while pursuing a free-trade policy and increasing her transit facilities by the extension of her railway system, would speedily divert from Victoria the Riverina trade, which he had already shown she had in previous years acquired.

MR. G. PHILLIPS BEVAN said he should like to have heard more in reference to the labour question. It must be remembered that for one man who went out to Victoria or any other colony for sheep farming, gold mining, or any other occupation which required capital, there were 500 or 1,000 who went out simply as labourers, and the real connection between England and the colonies was that produced by the labourers, who took their manual labour there and left all their friends behind. He was afraid the labour question in Victoria did not run so smoothly as it might do. The same questions which were agitating this country in regard to labour, were agitating not only Victoria, but also New South Wales and Queensland, and he should like to have heard something which would give some clue as to whether this question was to be one of the new world, as it was already of the old. He thought that the statistics of colonies might be very

much more elaborated and made more popular in this country than they were.

Mr. G. D. HOOPER asked if the author had any explanation which his official position enabled him to give as to the discrepancy between the imports and exports, for he took it the chief subject of interest to the meeting was protection *versus* free trade. It appeared that the imports per head of the population in Victoria exceeded the exports by about 2*l.*, and he should like to know whether Mr. Hayter thought this excess was due to the inauguration of the protectionist policy, or whether he did not think the very satisfactory and substantial progress alluded to in the paper was not in a very large measure due to the gold discoveries, the almost cessation of which had been chronicled in the paper. Mr. Hayter seemed to him to lay undue stress on the amount of revenue, and because that did not exceed 5*l.* per head in any other colony, he inferred the wonderful prosperity of Victoria; but this was not an infallible test. On the contrary, provided a government was efficient, the smaller the revenue it raised the better. As to the question of debt, with which the author dealt, he gave a table showing those countries whose debt was a certain multiple of their annual revenue. The United Kingdom stood near the top and Victoria near the bottom. Therefore, he argued, it was better able to pay its debt; but to show the *reductio ad absurdum* of that theory, he would mention that Peru stood very near Victoria. Its debt was but a small multiple of its annual revenue, and yet it was insolvent. Whether a country was in a fair position as to its national debt was not dependent only on the number of its population or the amount of its annual revenue. The revenue of Victoria, although it bore a large proportion to its debt, was not, taken alone, decisive, because it might in time crumble away. It was necessary to consider what resources lay behind the annual revenue. He should like added to the produce of wheat, &c., a third column, giving the average produce per acre of the various crops. There was one disheartening fact in the paper which he could not but allude to, namely, the large amount of wealth devoted to the development of the drink traffic. He would ask if appendices could not be added containing tabular statements of the exports and imports of the colony, because without such statistics they were unable to judge properly of the question of protection and free trade.

Mr. GIFFEN said he agreed with the previous speaker as to the proper mode of comparing the revenues and debts of different countries. It was really of very little use comparing the revenues of different countries per head, and comparing the proportion of debt of the different countries with the amount of revenue actually raised. The real comparison to be made, though it was difficult to obtain sufficient figures, was that of the amount of the revenue and debt with the taxable income. If the proportion of the debt to the taxable income was low, the country was not greatly indebted. Merely to compare the revenue per head and the debt per head, and to compare the debt with the actual revenue raised would avail

very little indeed. There were many other elements to be considered in the case, and he should have liked if Mr. Hayter had qualified the comparisons he had given, and had thrown some light upon the real extent of the resources of the different Australian colonies and the proportion of their burden compared with the United Kingdom. Mr. Hamilton, in the paper he read on New Zealand, went into some comparisons of this kind, which, although they were not perhaps perfectly accurate, were very useful. As to the question of protection, if Mr. Hayter, instead of saying shortly that protectionist duties had stimulated manufacturing in Victoria, had attempted to give some evidence to show that this had been the case, his paper would have been more valuable. He should say that if there had been no protectionist duties in Victoria, probably there would have been more manufacturing, and in any case the people would have been better off. The real question to be dealt with was not whether there was more manufacturing, but whether people were better off with protection than without it. In regard to the statistics of crime he would point out that the colonies of Australia were differently composed. In Western Australia they had, in fact, a convict settlement, and it was therefore of very little use comparing the statistics of Victoria with Western Australia. He thought also that it would be very interesting to have some comparison of the different proportions of the population in Victoria and the other colonies with which comparison was made. For instance, in one colony there might be a greater number of adult males of a certain age in proportion to the population than there was in another, and if so, there would very likely be more crime in a colony with a large proportion of male adults than in a colony where the population, as in England, was composed of a large proportion of women, children, and old men. If this were considered comparisons could be drawn with a greater degree of accuracy. He wished to say generally how much they were all indebted to Mr. Hayter for his paper. Mr. Hayter was one of their honorary members, and he had done them good service by reading a paper on the occasion of his visit to this country. It was only a specimen of the good work in statistics which Mr. Hayter had done. The "Year Book of Victoria," published by Mr. Hayter, was, in his (Mr. Giffen's) opinion, a volume which could compare with any statistical volume published by any Government in the world. There was no book which excelled it for practical usefulness and convenience, although there were some on the continent very much more ambitious in style.

Mr. H. D. POCHIN pointed out that if the revenue of Great Britain was made up in the same way as that of Victoria, namely by adding the receipts from the railways, and the postal and telegraph services, and other matters, the revenue as stated by the essayist, would be very largely increased.

Professor C. H. PEARSON, in answer to some of the previous speakers as to the yield of wheat in the colony, called attention to the fact that Professor Thorold Rogers in his valuable work on

"Agriculture and Prices" pointed out that the average yield of wheat in England during the fourteenth century was not probably more than from 8 to 12 bushels an acre. The yield was now 28 bushels, showing that the yield could be indefinitely increased in any country. So, again, the yield of wheat was smaller in South "Australia than in Victoria," but, none the less, South Australia was one of the greatest wheat producing countries in the world in proportion to its size, having exported something like 200,000 tons one or two years ago, with a population of not much more than 200,000. He believed that in all new colonies the instincts of the colonists led them to engage in nomadic agriculture. In South Australia, which was pre-eminently the wheat colony of Australia, all the country within 100 miles of Adelaide was being deserted by the colonists going farther north and taking up land which some years ago was little better than a desert. He thought that Victoria would be a great wheat producing country in the future. In reference to the free trade question, he himself was a free trader, though acting with the Liberal party who advocated a protective tariff there. No other policy would be endorsed by the majority of the people, and he might say there were no stronger protectionists than those who went out lately to the colony from England. In regard to whether or not woollen manufactures were succeeding, he gave an instance of the failure of the protective system where it might be expected to succeed. Wool was one of the first things an Australian would naturally protect, but he found on inquiry that one of the reasons why the factories did not succeed was because the raw material was necessarily and actually dearer to buy in Australia than in England. The wool season in Australia only extended over two or three months, when a stock of wool was laid in, whereas in England wool sales were constantly going on during the year, and the manufacturer did not want to borrow at all, and if he did, borrowed at a slight percentage. On the other hand, he would say that it was very difficult to apply the same general laws to these small communities as were applied to large communities. The fact that the Victorian people were more scattered than in any other part of Australia, and that they had greater facilities for shipping at Melbourne, enabled them to tide over the false economical system. If the duties of the colonies were examined one with another, it would be found that South Australia, though nominally a free trade colony, was not impeccable, but levied protective duties as against the products of its neighbours. There was no particular feeling about that, but very likely if the attention of the South Australian Government were drawn to it, it might be modified. Again, the duties in Victoria were far from being so high as the protective tariff in America. As to the money coming from lands, it was put a little too strongly by one speaker, that all the money coming from the sale of land ought to be funded for national purposes. It must be borne in mind that a colony starts at a great disadvantage from a settled country. It had no roads made for it, and although the expense of building churches and schools was not in the first instance a national charge, it was a charge which certainly bore upon the taxable strength of the population. A loan

had lately been negotiated at $4\frac{1}{2}$ per cent.; in better times the colony could have borrowed at $4\frac{1}{4}$, and the money would bring in $3\frac{3}{4}$ per cent., and he thought the honesty and good sense of the people might be trusted as their guarantee that they will not be defaulters for the other small proportion of the interest.

Mr. BRIDGWATER asked whether Victoria was so exceptionally peculiar in regard to aridity that moisture could not be introduced into the soil by artificial means. If this were done, he did not see why the colony of Victoria would not in future be able to maintain its prominence in regard to its financial returns which was at present so satisfactory.

Mr. HAYTER, in reply, said he was glad to find that the subject had attracted so large an attendance, had excited so much interest, and had elicited so animated and intelligent a discussion. Many questions had been asked, but he was happy to say none of his facts had been controverted, so if he had much to answer he had nothing to answer for. Some of the speakers had expressed regret that he had not given more information upon various points, but it must be borne in mind that it was necessary to bring the paper within reasonable limits, and if he had entered fully upon all the topics respecting which information was desired, material would have been afforded sufficient for six papers instead of one. Some of the speakers had assumed that he was a protectionist, but he had said nothing which should warrant such a conclusion. He had merely alluded to the fact that the imposition of protective duties in Victoria had undoubtedly stimulated manufacturing industry, and had purposely refrained from expressing any opinion as to whether this was for good or for evil. Many might say that the population would have been better employed in bringing more land under cultivation, clearing the forests, or searching for gold, but this was a point it was not for him to decide. The relative merits of free trade and protection was a question upon which political feeling in Victoria ran high, and he, as a public officer, and one consequently whom it behoved to refrain from all interference with politics, was naturally reticent of his opinion upon such matters. The President stated he thought he had detected in the paper a jealousy of the colony of New South Wales, but no such jealousy existed. In comparing the two colonies financially, he (Mr. Hayter) had been obliged to point out the necessity of taking into account the large revenue derived by New South Wales from land sales, but he had merely stated a fact and had placed no invidious construction upon it. Mr. Prance had stated that the credit of New South Wales stood higher than that of Victoria, but Mr. Prance was probably not aware that a few days since a loan had been raised by Victoria in the London money market upon most favourable terms, and that the debentures had immediately afterwards risen, and were still rising in price. With reference to the anticipations of the President that the progress of Victoria would not be so great in the future as in the past, he (Mr. Hayter) pointed out that whilst the annual yield of gold had fallen off from 11,000,000*l.* to 3,000,000*l.*,

the exports had scarcely at all decreased, and could not great things be hoped for a country which showed such elasticity. The President had likewise alluded to the low average yield of wheat in Victoria, and this had also been spoken of by the Rev. Mr. Doxsey and Mr. Paul, but it was a fact that the yield per acre was higher than that of any colony upon the Australian continent, and although it was not so high as that of Tasmania and New Zealand, the grain was of much better quality and was superior to that of any other country in the world except South Australia, and to that it was quite equal. The grain of New Zealand was so inferior to that the Victorian millers had been used to, that it was positively unsaleable to them, whilst at the same time the wheat of Victoria and South Australia commanded high prices. With reference to Mr. Walford's remark that there were only eight textile manufactories in the colony, it should be pointed out that some of these were upon an extensive scale, and that even as many as eight was a large number for a country which had been in existence for only forty-three years, and of which the population did not now amount to 900,000, so that there was a difficulty in procuring the requisite skilled labour. Statistics of fires were not obtained except in regard to fires on which coroner's inquests were held, which was only the case when suspicious circumstances existed. There was not however any reason to suppose that the crime of arson prevailed to any extent. With reference to the remarks of Mr. Cohen, the limits of his (Mr. Hayter's) paper and the restrictions placed upon him by his official position, had prevented him from going into the question of the progress of the colony under protection as compared with what it might have been under free trade. He (Mr. Hayter) thought that his paper teemed with proofs in regard to the great progress the colony had made under the circumstances in which it had been placed. In reply to the Rev. Mr. Doxsey, the agricultural statistics were gathered at the expense of the municipal bodies by collectors who acted under the direction of the Government Statist, and these statistics were most accurate. The statistics of the live stock were collected partly in the same manner, and partly by means of statements furnished by the pastoral tenants. They were not quite so reliable as the statistics of agriculture, but were rectified when a general census took place, which was once in ten years. Full details of wages and prices would be found in the appendices to this paper. The cost of living was undoubtedly lower, whilst wages were much higher in Victoria than in England. Mr. Paul had given some valuable information respecting the colony, and had contributed some useful statistics especially about wool and gold. These were matters which he (Mr. Hayter) could merely glance at in his paper, as so many other subjects demanded his attention. A considerable quantity of wool was brought into the colony overland from New South Wales, and was afterwards re-exported, but this was carried by Victorian railways, stored in Victorian warehouses, formed the security on which advances were made by Victorian merchants, paid a commission to Victorian brokers, and was shipped at Victorian ports, in vessels which paid Victorian harbour dues. As a matter of fact Victoria made a large

profit by this wool, and no one could object to its being included in her trade returns. With reference to Mr. Bevan's desire to hear more upon the labour question, and to his complaint that colonial statistics were not sufficiently elaborated, he (Mr. Hayter) referred the speaker to the "Victorian Year Book," which was to be found in the library of this Society, and as a popular statistical work had been pronounced by competent judges to be equal, if not superior, to anything which was to be found elsewhere. Full information would be discovered there upon the subjects inquired into by Mr. Bevan. In reference to the remarks of Mr. Hooper, he (Mr. Hayter) said that all other things being equal, the amount of the revenue raised in a country, if this was done without causing distress to any class, and general prosperity prevailed, afforded an indication of its being able to pay its debts. Victoria occupied a high position in this respect. Mr. Hooper had named a country which he stated to be insolvent, although it raised a large revenue, but that might be from dishonesty, extravagance, or other circumstances, which did not apply to a British community. It was his (Mr. Hayter's) intention to add appendices to his paper containing tabular statements, but these had not yet been printed. He (Mr. Hayter) quite agreed with Mr. Giffen that the proper mode of comparing countries financially was to contrast their revenues and debts with the taxable income, but it was impossible to procure the requisite data for such a comparison. Victoria being undoubtedly prosperous, as he (Mr. Hayter) had shown, whilst its revenue was high, the inference naturally was that its taxable income must be high also, and its debt being low in proportion to its revenue, that it was not dangerously indebted. Mr. Giffen had hazarded the opinion that there would probably have been more manufacturing in Victoria if there had been no protection, and at any rate the people would have been better off. He (Mr. Hayter) had already said that he was not there as the champion of protection, but he pointed to the other Australian colonies in which protective duties had not been introduced, and where manufacturing industry had advanced but little, and the people were not better off than in Victoria. Mr. Bridgwater had asked whether the condition of agriculture could not be improved by irrigation. This was being done, and extensive works had been undertaken by the Government, and more were projected. A private company also proposed to construct irrigation works upon a large scale. Where practical effect had been given to irrigation, excellent results had followed.

On the motion of Dr. Farr, a vote of thanks was accorded to the author for his valuable paper, and the meeting adjourned.

On some PHASES of the SILVER QUESTION.

By STEPHEN BOURNE, F.S.S.

[Read before the Statistical Society, 1st April, 1879.]

CONTENTS :

	PAGE		PAGE
I.—Connection of Gold with Silver	407	X.—Concluding Remarks	432
II.—Relation of Production and Quantity of Precious Metals to State of Trade	408	Postscript	433
III.—Sufficiency of Gold Supply..	411		
IV.—Fall in Prices	413	APPENDIX :	
V.—Purchasing Power of Gold..	417	A.—Production of Gold and Silver for Different Countries	436
VI.—Variations in the Value of Gold	419	B.—Imports and Exports of Coin and Bullion into and from Different Countries	437
VII.—Production and Depreciation of Silver	421	C.—Imports and Exports of Merchandise into and from Different Countries	438
VIII.—Depression of Trade	425	D.—Prices 1872 and 1878, Imports	439
IX.—Bi-metallic and other Theories	428	E.— „ „ Exports	441

It is with much diffidence that I approach the very difficult question which stands for discussion on the present occasion. At other times when it has been my lot either to introduce or take part in the subject of debate, the matters under consideration have generally been those upon which official experience had qualified me for the expression of opinions that might be held with some confidence; and though those opinions have sometimes been at variance with generally received views, the course of events has shown them to have been of some value in directing the course of inquiry, and eliciting information on topics of great national importance. In the present instance the inducement to investigate the question has been the belief that it was fitting that this Society should discuss it, and that coming to the inquiry without any preconceived notions or special theory to support, and bringing to bear upon it the habit of careful observation and comparison, it might be possible for me to bring together facts and figures such as might serve to call forth the knowledge and experience of those whose judgment on the various points at issue would be of greater value than my own. Assured that whatever may be adduced will meet with kind attention, I shall feel happy if the effort now to be made should succeed in throwing any light on the subject, or of drawing out the intelli-

gent thoughts of those to whom it has been an object of interest or study. In thus doing I must disclaim any intention of taking a comprehensive grasp of that which in all its bearings and results is too wide for me to attempt, and I have therefore limited the title of this paper to that of "*Some Phases of the Silver Question.*"

I.—*Connection of Gold with Silver.*

It is obviously impossible to treat of silver apart from gold. The two metals have in common not only that they belong to the same class, and, as articles of consumption subserve much the same purposes; but that they have by universal consent been selected for use as a medium of exchange—the representatives of value for other articles—and thus as money have an employment distinct from all other substances (excepting the limited use of copper or bronze as coins). In our country when we speak of the depreciation of silver, we mean that a definite weight of it will pass in exchange for a lesser weight of gold than it did; that the pound sterling will purchase more of it than was formerly the case—that is, that an alteration has taken place in the relative value which it and gold bear to each other. That whereas in July, 1859, when the highest price was reached, $62\frac{3}{4}d.$ per standard ounce, 15 grs. of pure silver were exchangeable for 1 gr. of pure gold; in the same month of 1876, when it fell as low as $46\frac{3}{4}d.$, it took 20 grs. of the former to purchase one of the latter, the extreme fall being $25\frac{1}{2}$ per cent. Practically, however, we have to deal with a fall from $60\frac{1}{2}d.$ —the average for 1871, and also for the whole period from 1833 to 1871—to $49\frac{3}{4}d.$, the average price of the last eight weeks, being a depreciation in value as compared with gold to the extent of 18 per cent.

We are so accustomed to speak and think of gold as having a fixed value because a certain weight of it, stamped with the Queen's image and named a sovereign, is the legal and tangible representative of the pound sterling in which all our contracts or engagements are expressed, that we forget that gold too varies in price. For unless we have it in possession we can only obtain it by parting with something else we possess, or promising to pay so many pounds for it at some future time, and to thus obtain it we must accept the purchasers' terms for the goods, or the promise, we choose to sell. Whenever we try thus to sell, we find that the number of sovereigns to be received varies with the current value of other articles or the rate of interest on loans. Thus gold measured with other standards alters its relative worth, and it is always difficult to say whether the variation is in the gold or the article, or in both together. The only real fixture in value is the pound sterling, which, though in itself an imaginary standard,

becomes a very real one when practically applied.* Now there can be no doubt that for many years succeeding the gold discoveries in California and Australia the purchasing power of the sovereign became lessened, gold was said, and truly so, to be depreciated in value; now again the purchasing power of the sovereign is rising, and gold is said to be undergoing an appreciation. That is, it goes further in the purchase of articles, though not in the payment of debts; but whether this is due to the increased value of gold in itself, or to a decrease of value in the articles it procures, is a point not easy to determine, and yet in relation to silver it is one of vital moment. It may be remarked here, though this point must be treated afterwards, that during the whole course of the plentifulness of gold, silver never varied more than from $58\frac{7}{8}d.$ per oz. in May, 1845 (the lowest point until recently), to $62\frac{3}{4}d.$ in July, 1859, a range of $6\frac{1}{2}$ per cent. as opposed to the present fall of 18 per cent.

The arguments on which this assumed appreciation of gold is stated to rest, are: 1st, That the production being diminished, it becomes scarcer, and therefore must increase in value. 2nd, That there is so general a fall in prices as could only have arisen from the gold with which they are paid having actually become more valuable. A little inquiry into the accuracy of these views is absolutely necessary before we can consider the relative worth of silver and gold. Let us first of all see what are the actual facts as to the quantity of gold in circulation, and the work it has to perform. It will scarcely be contended that so far as our home trade is concerned, there is any want of sovereigns for all the transactions of daily life. If there be scarcity it must be found in impediments to the discharge of international obligations, or the conduct of the larger operations of home trade; and in neither of these does the difficulty seem to exist.

II.—*Relation of Production and Quantity of Precious Metals to State of Trade.*

There would seem to be the greatest difficulty in obtaining any estimate of the total quantity of the precious metals in existence, either at the present or any former period. As regards the production since 1849 or 1852, there is not much difference of opinion. Messrs. Tooke and Newmarch, followed by the "Economist," consider that between the former year and 1875 the world's production of gold has been 573,652,000*l.*, whilst Sir Hector Hay† gives 572,195,000*l.* from the latter, and during the same period 241,890,000*l.* of silver, together 814,085,000*l.* The same authorities would set down the consumption in the arts and manufactures and wear and tear of coin at about 2,000,000*l.* per annum of each metal;

* See Postscript, p. 433. † "H. C. Com. on Depreciation of Silver," 1876.

thus if we accept either estimate, leaving something more than 500 million pounds sterling to have been added to the stock of gold, and something less than 200 millions to that of silver. Prior to 1849 it is supposed by Tooke and Newmarch that 560 millions' worth of gold was in existence—about an equal quantity to that since produced. If so, there must at the present time be more than 1,100 millions diffused amongst the various countries in which it is used. Mr. Seyd's* opinion is that in 1849 there was about 400 millions, that 500 was raised between that year and 1875, but only 350 millions of this was added to stock, the difference having been absorbed in various uses; so that there was then but 750 millions in circulation, which, brought down to this year, would be

TABLE I.—*Showing the Estimated Production of Gold and Silver in each Year from 1849 to 1877; with the Imports and Exports of Bullion and Coin, as well as Merchandise, into and from the Principal Countries, since 1860.*

[In million £'s to two decimals.]

Year.	Production of Precious Metals.			Bullion and Coin.			Merchandise.		
	Gold.	Silver.	Total.	Imports.	Exports.	Total.	Imports.	Exports.	Total.
1849	5'42	8'12	13'54	—	—	—	—	—	—
'50	8'89	8'12	17'01	—	—	—	—	—	—
'51	13'52	8'12	21'64	—	—	—	—	—	—
'52	36'55	8'12	44'67	—	—	—	—	—	—
'53	31'09	8'12	39'21	—	—	—	—	—	—
'54	25'49	8'12	33'61	—	—	—	—	—	—
'55	27'02	8'12	35'14	—	—	—	—	—	—
'56	29'52	8'13	37'65	—	—	—	—	—	—
'57	26'66	8'13	34'79	—	—	—	—	—	—
'58	24'93	8'13	33'06	—	—	—	—	—	—
'59	24'97	8'15	33'12	—	—	—	—	—	—
'60	23'85	8'16	32'01	83'72	83'30	167'02	677'87	580'69	1,258'56
'61	22'76	8'54	31'30	71'71	73'79	145'50	692'81	540'56	1,233'37
'62	21'59	9'04	30'63	91'98	89'02	181'00	681'01	570'84	1,251'85
'63	21'39	9'84	31'23	97'68	96'14	193'82	745'87	654'57	1,400'44
'64	22'60	10'34	32'94	108'62	109'75	218'37	829'78	702'77	1,532'55
'65	24'04	10'39	34'43	93'22	72'85	166'07	810'25	729'26	1,539'51
'66	24'22	10'14	34'36	131'59	96'61	228'20	892'27	757'85	1,650'12
'67	22'80	10'85	33'65	101'61	64'41	166'02	891'76	749'47	1,641'23
'68	21'95	10'04	31'99	94'62	80'19	174'81	949'90	773'61	1,723'51
'69	21'24	9'50	30'74	86'28	68'36	154'64	983'89	807'84	1,791'73
'70	19'90	10'90	30'80	90'57	70'67	161'24	969'18	831'43	1,800'61
'71	21'10	11'00	32'10	105'29	108'32	213'61	1,127'78	954'68	2,082'46
'72	20'60	11'20	31'80	104'57	89'61	194'18	1,226'25	1,028'73	2,254'98
'73	19'30	12'20	33'50	152'58	145'80	298'38	1,273'72	1,056'88	2,330'60
'74	19'40	12'90	32'30	106'45	69'26	175'71	1,251'97	1,055'54	2,307'51
'75	19'50	13'40	32'90	121'30	82'32	203'62	1,272'37	1,042'72	2,315'09
'76	19'00	14'80	33'80	105'47	87'03	192'50	1,267'28	1,025'04	2,292'32
'77	19'40	16'10	35'50	119'89	99'77	219'66	1,236'26	1,011'85	2,248'11
'78	17'80	14'70	32'50	—	—	—	—	—	—

* Committee of House of Commons Report.

about 800 millions only. Thus both estimates assume that there is now, as near as may be, double the quantity there was thirty years ago. Our concern, however, is not so much with the actual amount, as the rate at which it has increased, and the necessity or opportunity for its employment has arisen. These are points on which great diversity of opinion is sure to be found, and anything like certainty is scarcely to be expected; but in the preceding table I have endeavoured to place in juxtaposition some information which may help towards the formation of a tolerably accurate judgment.

The first section sets forth the assumed production of both gold and silver since 1849. It is taken from the Appendix to the Report of the House of Commons Committee on the depreciation of silver, and, excepting for the first and last three years, the figures are those given by Sir Hector Hay.* Our present purpose is with gold alone. During the first twelve years, that is up to and including 1860, the amount is 278 millions; deducting 24 millions as used up, and adding the remainder to the 560 in existence prior to 1849, it may be assumed that 814 millions were available for circulation as coin or in bullion in 1860.

In the second section there are collected together the imports and exports of coin and bullion in both metals between the principal countries for each year from 1860 to 1877. The countries embraced in this collection are Russia, Hamburg, Holland, Belgium, France, Italy, Austria, United States, with the United Kingdom and her possessions in India and elsewhere, constituting probably five-sixths of the world's traffic. The particulars are taken from the several official "Statistical Abstracts" for the United Kingdom, foreign countries, and our colonies. The latter two do not go back further than 1860. With the exception of the quantities received from or sent to countries not named, it is evident that the return will be double, the import of one country being in each case the export of another, but by adding the two together and taking the mean amount we may obtain a tolerably correct idea of the movements to and fro in each year. It is not practicable to obtain the separate quantities of gold and silver from all countries, nor to rely implicitly on the division in those in which it is recorded, but Mr. Giffen in a table laid before the Committee has shown that for the United Kingdom the proportion of silver to gold stood for the years—

1858-61 as	.....	0'57 to 1
'62-66 "	.....	0'63 " 1
'67-71 "	.....	0'63 " 1
'72-75 "	.....	0'59 " 1

the average of the whole period being 0'61 to 1.

* The figures from 1870 onwards are altered from those originally read, Sir H. Hay having kindly supplied them with the latest corrections, so that the whole of the series, 1852-78, now rests upon the same authority. Other estimates for recent years are somewhat higher.

For reasons which it is not necessary to explain, I am induced to think that the proportion of silver for the middle period, 1862-72, was overstated in the official tables, possibly so for other years, and that 0.50 or 0.55 to 1 would be a better ratio. Allowing then that between other countries there is more frequent transport of silver, it will not be far wrong to roughly estimate that altogether there would be twice as much gold as silver, and therefore that two-thirds of the movements are in the superior metal. This would show that the quantity of gold carried backwards and forwards in 1860 was 56, and in 1877 73 millions.

In the third section a like collection has been made of the imports and exports of merchandise, giving a tolerable representation of the trade of perhaps five-sixths of the whole world. Taking, as before, the mean between the two, we get goods to the value of more than 600 millions in 1860, and 1,100 millions in 1877 internationally exchanged, and having to be paid for in specie or by some other mode of settlement.

III.—*Sufficiency of Gold Supply.*

The connection of this information with the subject may not at first sight be apparent, but its purport is to show that the trade of the world has not increased in an undue proportion to the stock of gold available for the purposes of the settlement of accounts between the different countries.

This will appear on comparing the progress made from year to year, thus—

	Existing Gold.	Moving Bullion.	Moving Merchandise.
	Mlms.	Mlms.	Mlms.
1860.....	814	84=10 per cent.	629= 77 per cent.
'61-66 average.....	876	94=11 "	717= 82 "
'67-72 ".....	996	89= 9 "	941= 94 "
'73.....	1,072	149=14 "	1,165=109 "
'74.....	1,089	88= 8 "	1,154=106 "
'75.....	1,106	102= 9 "	1,158=105 "
'76.....	1,125	96= 9 "	1,146=102 "
'77.....	1,145	110=10 "	1,124= 98 "

From 1860 up to 1873, the year in which the trade of the world reached its highest point, whilst there was a continuous addition to the stock of gold, and a corresponding activity in the movements of the precious metals, there was a still greater increase in the interchanging of goods. Yet the gold in existence was ample for conducting the necessary exchanges. From 1873 to the present time there has been a steady decline in trade, and all the while an accession of gold, which forbids the supposition that there is an insufficient quantity for the purposes of international exchanges. There are no data for determining in what degree the

home trade of the various nations has advanced, but it is pretty certain not to have done so to a greater extent in the several nations than their foreign has done. Nor are there any indications, so far at least as our own country is concerned, that the supplies of gold have been below our needs. The records of the London Clearing House are generally taken to show the magnitude of the business being transacted, and in these the highest point was reached in the same year, 1873, when the amount of clearing was 6,003 millions; having risen from 3,257 in 1868, and now fallen again to 4,885 in 1879. The amount of bullion which the Bank of England was enabled to retain and consequently the extent of its note circulation, as shown in Table II, together with the same particulars for the Bank of France, would seem to show that there was no lack of gold to meet the uses to which it had to be applied.

TABLE II.—*Yearly Transactions of London Clearing House and Banks of England and France, compared with Estimated Accumulations of Gold and Silver since 1851.*

[In million £'s to two decimals.]

Year.	London Clearing.	Bank of England.			Bank of France.		Accumulation of Coin and Bullion since 1851.
		Bullion.	Circulation.	Banking Reserve.	Bullion.	Circulation.	
							Mlrs.
1849....	—	15'16	18'38	10'70	—	—	—
'50....	—	16'65	19'47	11'20	18'80	—	—
'51....	—	14'55	19'49	9'00	22'71	—	—
'52....	—	20'50	21'88	12'70	19'91	—	41
'53....	—	17'75	22'60	8'80	12'38	—	76
'54....	—	14'50	20'80	7'20	14'67	—	106
'55....	—	14'30	19'80	8'30	8'22	—	202
'56....	—	10'40	19'60	5'70	7'18	—	231
'57....	—	10'11	19'40	5'30	9'03	—	260
'58....	—	17'85	20'20	12'00	21'53	—	288
'59....	—	17'93	21'30	11'00	22'19	—	315
'60....	—	15'24	21'20	8'40	15'97	30'10	137
'61....	—	13'01	20'00	7'50	12'87	30'08	171
'62....	—	16'34	20'80	10'10	12'08	32'52	342
'63....	—	14'55	20'60	8'50	8'06	32'06	369
'64....	—	13'49	20'50	7'50	14'02	31'18	398
'65....	—	14'53	21'00	8'00	17'50	33'00	428
'66....	—	14'87	23'10	6'60	27'87	37'50	458
'67....	to 30th April	21'34	23'40	12'80	39'78	42'62	488
'68....	3,257'41	20'79	23'90	11'80	44'30	48'96	516
'69....	3,534'04	18'81	23'40	10'30	49'36	54'64	543
'70....	3,720'62	20'78	23'30	12'40	19'89	63'44	571
'71....	4,018'46	23'59	24'40	14'20	25'38	81'54	601
'72....	5,359'72	22'58	25'50	12'20	31'65	97'80	630
'73....	6,003'34	22'70	25'70	12'00	30'70	114'50	660
'74....	5,993'59	22'29	26'30	11'00	53'01	107'56	688
'75....	6,013'30	23'92	27'30	11'60	67'17	100'66	720
'76....	5,407'24	28'70	27'70	16'00	86'76	99'82	753
'77....	4,873'00	25'37	27'90	12'50	81'70	99'70	787
'78....	5,066'53	23'84	28'06	10'70	81'67	93'89	822
1 Jan. 1879	4,885'09	28'08	32'80	10'30	81'06	—	—

Beyond this, there can be no question that every ounce of gold is at the present moment capable of doing more duty than at any former period. In proof of this it is sufficient to allude to a few of the alterations which have taken place. The opening of the Suez Canal has halved the time occupied in transmitting bullion to and from the East and Australia, and in like degree abridged the interval between the dispatch of goods from hence, and the realisation of their value in the countries of sale. An almost equal increase in the rapidity and frequency of communication by steam between other parts of the world, and especially in the use of telegraphic intercourse, has produced much the same result in other directions. Then the extension of banking facilities has rendered unnecessary and unusual the storing up of any quantity of coin by traders or private individuals, and occasioned the vast majority of receipts and payments to be made with the use of very little money; how little will appear from the following analysis of "the total payments to credit of customers" kindly furnished by a banker, whose business may be taken as a sample of the general usage:—

	Per Cent.
Bills of exchange	8·6
Cheques	88·5
Bank notes	2·6
Coin.....	0·3
	<hr/>
	100·0

Do not these several observations justify the conclusion, that though at particular times and places there may be a temporary deficiency of supply; so far from there being any scarcity of gold, there never was a period in the world's commercial history when the existing quantity was so large as it is at present, in proportion to the necessity for its use or the purposes it has to serve?

IV.—*Fall in Prices.*

Much stress has been laid upon the general fall in the price of commodities as an evidence that gold has become appreciated, and hence the inference drawn, particularly by Mr. Giffen in his paper read not long ago before this Society,* that "very likely gold and silver have both changed." This opinion is so important as to deserve close investigation into its validity.

Mr. Giffen puts "the average *fall* of prices between 1873 and "1877 at more than 20 per cent., exclusive of course of the additional fall in 1878." The "*Economist*," writing on 28th December

* *Journal*, vol. xlii, pp. 57 *et seq.*

last, referring to a letter from Professor Jevons in its number of 8th May, 1869, "reasserting with the utmost confidence that a real *rise* in prices to the extent of 18 per cent. had been established "since 1849," endeavours to show "that a real *fall* in prices to the "extent of 16 per cent. has been established since 1869." Each of these three authorities measures the fluctuations which have taken place by a system of index numbers, in which the average prices of a number of articles (twenty-two in one case, fifty in another), ascertained in the years 1845-50, are each represented by 100, and the variations in every subsequent year by a corresponding addition or otherwise to this number. The aggregate of these several ratios becomes then the "index number," representing the value of all commodities, and consequently the general rise or fall which prices have sustained in each successive year for which the calculations have been made. Dividing this number by as many articles as have been employed, the average is ascertained.

This system appears so well adapted to attain the desired results, that I have followed it in constructing tables, showing not only the prices prevailing in this country, but likewise of some staple articles in the place of their production; taking as the price the average of the year's transactions shown in the "Statistical Abstracts" for Foreign Countries and for Colonial Possessions," issued from the Board of Trade. I am unable, however, to adopt the "Economist" figures as they stand, for they seem to me to err, inasmuch as of the twenty-two articles four are for different descriptions of cotton goods; and as this commodity is subject to unusual fluctuations, the alterations in price affect the "index number" in a fourfold degree. I have, therefore, corrected the figures by including only one value for cotton (the average of the four), and have added coal,* as an article too important to be left out; thus obtaining an average of twenty instead of twenty-two articles. Professor Jevons's figures differ somewhat in principle. I should have preferred using them, but that they are not carried forward further than 1869, and the subsequent years are essential to the question under consideration.

The "Economist" numbers, together with the same as I have ventured to alter them, and those of Professor Jevons, will thus compare together:—

* The exceptionally high prices to which coal, together with iron and other articles in the manufacture of which coal is consumed, rose in 1872 and following years, unduly raises the index numbers. But for this cause those for 1872 to 1875 would probably have been 125, 132, 127, 124, rather than 133, 142, 136, 130, as shown in column 3 of next page.

Year.	"Economist."	Same Corrected.	Jevons.
1847.....	—	—	122
'48.....	—	—	106
'49.....	—	—	100
'50.....	—	—	101
'51.....	104	103	103
'52.....	—	—	101
'53.....	107	114	116
'54.....	—	—	130
'55.....	—	—	125
'56.....	—	—	129
'57.....	136	140	132
'58.....	119	123	118
'59.....	115	118	120
'60.....	122	123	124
'61.....	124	124	123
'62.....	131	125	124
'63.....	158	144	123
'64.....	172	151	122
'65.....	162	138	121
'66.....	162	141	128
'67.....	137	128	118
'68.....	122	122	120
'69.....	121	118	119
'70.....	122	119	—
'71.....	118	118	—
'72.....	129	133	—
'73.....	134	142	—
'74.....	131	136	—
'75.....	126	130	—
'76.....	123	123	—
'77.....	123	126	—
'78.....	116	118	—
'79 (1st January)	101	106	—

Note—Average 1845-50, for each series, 100.

It will be noticed that all the foregoing numbers relate solely to prices in this country. In dealing with those in other countries it becomes necessary to adopt a different point of comparison or datum line, because there are not within my reach any available records earlier than 1861 from which to ascertain the average of the six years 1845-50, that would be represented by 100. I have therefore formed a new index number, in which 100 stands for the average of each article for the six years 1877-72, thus working backwards and showing each of the specified articles for each year in its relation to that number. In this manner it becomes practicable to compare to some extent the prices in other countries with our own. The following table shows these in detail:—

TABLE III.—*Index Numbers for Prices of certain Articles in the Country of Production. The Average of Six Years, 1872-77, being represented by 100.*

Year.	Wheat.			Cotton.		Wine, France.	Silk, France.	Rice, India.	Opium, India.	Tea, China.
	Eng- land.	United States.	France.	United States.	India.					
1849.....	83	—	—	—	—	—	—	—	—	—
'50.....	75	—	—	—	53	—	—	—	87	—
'51.....	72	—	—	—	61	—	—	—	77	—
'52.....	76	—	—	—	57	—	—	—	79	—
'53.....	100	—	—	—	55	—	—	—	87	—
'54.....	136	—	—	—	56	—	—	—	72	—
'55.....	141	—	—	—	55	—	—	—	61	—
'56.....	131	—	—	—	55	—	—	—	70	—
'57.....	106	—	—	—	55	—	—	—	74	—
'58.....	83	—	—	—	50	—	—	—	92	—
'59.....	82	—	—	—	74	—	—	—	108	—
'60.....	100	—	—	—	53	—	—	—	116	—
'61.....	104	95	122	71	—	148	123	120	121	—
'62.....	104	88	82	150	103	156	111	126	123	—
'63.....	84	100	63	376	157	155	106	124	115	—
'64.....	75	103	74	529	258	141	108	105	115	—
'65.....	78	140	78	554	283	128	145	83	89	—
'66.....	94	109	96	277	175	113	139	71	93	—
'67.....	121	98	93	195	153	114	114	89	107	—
'68.....	119	147	82	125	129	110	129	100	108	—
'69.....	90	108	78	161	114	121	134	86	108	—
'70.....	88	100	82	152	136	111	136	97	101	—
'71.....	107	102	82	96	133	100	121	110	95	—
'72.....	107	113	92	124	104	112	112	104	108	—
'73.....	110	102	108	121	111	101	99	102	105	—
'74.....	104	111	104	99	104	100	85	90	96	—
'75.....	85	88	96	97	96	94	89	104	96	—
'76.....	87	96	93	83	94	91	119	94	96	—
'77.....	107	90	107	76	91	101	96	107	98	—
'78.....	87	—	—	—	—	—	—	—	—	—
Avrge. } 1872-7 }	100	100	100	100	100	100	100	100	100	100

The mean number of these nine articles, compared with those previously shown as altered from the "Economist," and converted to the datum line of the preceding table, will then stand thus running backwards:—

	Home Prices.		World Prices.			Home Prices.		World Prices.	
1879	80	—	—	—	1869	90	—	111	—
'78	90	—	—	—	'68	93	—	116	—
'77	96	97	97	97	'67	98	—	120	—
'76	94	95	95	95	'66	107	—	132	—
'75	99	94	94	94	'65	105	—	175	—
'74	103	99	99	99	'64	115	—	170	—
'73	108	107	107	107	'63	109	—	143	—
'72	101	108	108	108	'62	95	—	116	—
'71	90	105	105	105	'61	94	—	113	—
'70	91	111	111	111	'60	94	—	—	—

It is obvious that these foreign prices are too limited in number and in range of articles to form an adequate basis for comparison, but so far as they go they indicate—more especially in the earlier years—a great difference from those at home. The later years approach much nearer to each other, a proof how much rapid transit, more especially the speed of telegraphic communication, does towards equalising prices in the most distant places.

Many curious questions may arise out of these comparisons, which it would be unfitting at present to discuss, but the figures having been collected at considerable labour are set forth in much greater detail than is perhaps necessary, in the hope that they may be available for other objects than the one we are now pursuing. It is important, however, to notice their great irregularity and the absence of any steady sequence of rise or fall which would establish the fact that prices are affected wholly or even mainly by the existing quantities of gold or silver.

V.—*Purchasing Power of Gold.*

There can be no question that with the gold discoveries and the sudden influx of money thus produced, there was a great increase in prices, giving evidence of a diminution in the purchasing power of gold, and there has lately been a lessening of price which materially adds to that purchasing power; but it may fairly be questioned whether this is rightly attributed to a depreciation at one time, or appreciation at another of the metal itself, rather than to the influence of other causes, appreciating and depreciating at different periods the commodities which gold is employed to purchase. If I may be allowed the expression of an opinion differing from that of so many great authorities, I would venture to assert that the influence of gold in raising or reducing prices depends not so much upon the quantity of it available for use, as on the circumstances attending its production, and the facilities offered for its employment. Wealth of any description easily and rapidly acquired has a tendency to an equally easy and rapid dispersion. The sudden acquisition of money by those who rushed into gold mining, combined with the abstraction of so much labour from other pursuits, and the employment of so much more labour in ministering to the wants of those who ceased to become producers, could not do otherwise than raise the demand for the necessaries and luxuries of life beyond the supply, and thus enhance their cost. Almost exactly the same thing has happened with other commodities than gold, at one time iron, at another coal, at another something else, has brought about the same result. These have been real additions to the wealth of the world, because

they have been articles of real utility, but their influence has been less enduring because of their destructibility, whilst gold as money is almost indestructible. The stone thrown into the pond, partly by its bulk and partly by its imparted force, raises the level of the water with which it comes in contact, but each succeeding ripple becomes lower and lower, till no elevation is perceptible; so the masses of gold thrown amongst the moving multitude of purchasers, raised the level of prices; but with each succeeding transmission from hand to hand its elevating power became less, and notwithstanding the mass still remains, its influence on prices ceases. Were it otherwise, with the ever-increasing stock of gold in the world, and the constant growth of realised property, which in the securities by which it is represented answers the purpose of gold for exchanges, there should be an ever-increasing rise in prices; and at the present moment, with the store of gold in this country, prices should be higher than ever. We must look then for other causes for the recent fall of prices. They are to be found in the condition of the manufacturers for foreign markets, who, unable as before to effect profitable exchanges of the goods wherewith to obtain possession of gold to purchase articles of consumption, cannot give high prices, which thus perforce must sink.

A striking confirmation of the previously expressed views that the alteration in prices must be attributed to other causes than the influence of gold, may be derived from the study of some tables furnished to the "*Economist*" in July of last, and January of this year, comparing the imports and exports of 1872 with those of 1877, and 1877 with 1878 (a similar comparison of 1872 with 1873 having appeared in "*Lloyd's List*" of June, 1873). These tables I have combined into one contrasting the import trade of 1878 with 1872, and another the exports for the same periods. They will be found in the Appendix (D and E); but the results are not so marked as in the originals, because of the rise in many articles which took place between 1872 and 1877, being balanced or varied by the fall which was experienced in the following year. A few extracts showing the actual increases and decreases in prices on the values of certain classes of articles will make this apparent.

In the face of such irregularities of growth and decay in value as are here manifested, it is impossible to ascribe the changes wholly or chiefly to any assumed alteration in the valuation of the gold in which the values are expressed. These tables were compiled in the first instance to determine how far the diminution of our trade was due to the quantities as they rose and fell, or to the progressive alterations of prices. They have an important bearing upon the present question from the disparity they show between imports and exports; the one for several years manifesting a

tendency to increase in price, the other to a fall; most incontrovertibly demonstrating that these changes were in the goods themselves and the circumstances of the buyers and sellers, *not* in the value of gold. Thus—

[In million £'s to two decimals.]

	Year.	Value.	Increase or Decrease on 1872.	Increase or Decrease on 1877.
		£	£	£
<i>Imports—</i>				
Animal food	1877	36'34	+ 3'50	—
„	'78	40'29	—	— 3'75
Vegetable food	'77	102'18	— 1'04	—
„	'78	89'28	—	— 10'17
Cocoa, coffee, and tea	'77	20'82	+ 1'52	—
„	'78	19'80	—	— 0'71
Textile materials	'77	74'92	— 17'58	—
„	'78	70'43	—	— 3'34
Total food consumption	'77	183'77	+ 2'38	—
„	'78	172'67	—	— 15'74
Total materials for manufacture	'77	128'12	— 22'98	—
„	'78	122'34	—	— 8'21
<i>Exports—</i>				
Textile manufactures	1877	100'55	— 25'12	—
„	'78	98'65	—	— 2'70
Total British produce	'77	142'36	— 39'19	—
„	'78	138'46	—	— 5'31
Total foreign and colonial goods	'77	36'63	— 2'22	—
„	'78	37'76	—	— 1'61

VI.—*Variations in the Value of Gold.*

But apart from the variations in the value of gold, as measured by its power to purchase other commodities, some consideration is due to the alterations in its value for use as money, not for expenditure in consumption but in production. Although absolutely inert in itself, and unable to increase as natural products do, or as the products of labour, whether bodily or mental, do; it yet has a power to increase in the hands of its holders by drawing to itself that which other means have produced. In this sense it may be said to have two values—permanent and temporary—according as it is devoted to stationary or fluctuating investment. The one value is to be seen in the price of the public Funds; the other in the price of short-lived employment, as represented by the Bank rate. The following table shows the price for thirty years of English consols and French rentes, each paying 3 per cent. interest, and for the same period the minimum bank rates in England, France, and Germany.

TABLE V.—*Showing the Yearly Average Price of Government Stocks, and Bank Rates of Discount in England, France, and Germany, from 1849-78.*

Year.	England.		France.		Germany.	
	Consols.	Bank Rate.	Rentes.	Bank Rate.		Bank Rate.
	£	Per cent.	frs.	Per cent.		Per cent.
1849	92 $\frac{3}{8}$	2·93	53·65	4·00	—	4·05
'50	96 $\frac{1}{2}$	2·50	56·67	4·00	—	4·00
'51	97 $\frac{7}{8}$	3·00	57·13	4·00	—	4·00
'52	99 $\frac{3}{8}$	2·15	74·95	3·17	—	4·00
'53	97 $\frac{3}{4}$	3·69	79·52	3·23	—	4·25
'54	91 $\frac{7}{8}$	5·11	70·30	4·33	—	4·35
'55	90 $\frac{1}{2}$	4·89	67·12	4·44	—	4·10
'56	93 $\frac{1}{8}$	6·06	70·42	5·54	—	4·95
'57	91 $\frac{7}{8}$	6·67	68·02	6·16	—	5·75
'58	96 $\frac{7}{8}$	3·23	70·65	3·69	—	4·50
'59	95 $\frac{1}{8}$	2·73	67·49	3·46	—	4·20
'60	94	4·18	68·99	3·64	—	4·00
'61	91 $\frac{1}{2}$	5·27	68·29	5·53	—	4·00
'62	93	2·53	69·26	3·77	—	4·00
'63	92 $\frac{5}{8}$	4·41	68·55	4·63	—	4·10
'64	90 $\frac{3}{4}$	7·40	66·05	6·50	—	5·30
'65	89 $\frac{1}{2}$	4·77	67·74	3·72	—	4·95
'66	88	6·95	68·00	3·67	—	6·20
'67	93	2·54	69·03	2·71	—	4·00
'68	93 $\frac{7}{8}$	2·10	69·91	2·50	—	4·00
'69	92 $\frac{7}{8}$	3·20	71·41	2·50	—	4·10
'70	92 $\frac{1}{2}$	3·10	65·82	3·99	—	4·85
'71	92 $\frac{3}{4}$	2·89	53·85	5·71	—	4·15
'72	92 $\frac{1}{2}$	4·10	54·75	5·16	—	4·30
'73	92 $\frac{1}{2}$	4·79	56·52	5·15	—	5·05
'74	92 $\frac{1}{2}$	3·69	60·95	4·29	—	4·35
'75	93 $\frac{3}{4}$	3·23	64·94	4·00	—	4·70
'76	95	2·60	68·81	3·40	—	4·15
'77	95 $\frac{3}{8}$	2·90	—	2·25	—	4·40
'78	95 $\frac{1}{4}$	3·75	—	2·25	—	—

In this country and in others having a gold standard, whereby there is a fixed relation between the ounce of metal and the pound sterling or other unit, having no other term whereby to express value than this same sovereign, we are apt to forget that gold really does fluctuate in value almost as greatly as other commodities; or at least we are in the habit of thinking of depreciation or appreciation, as a gradual process so slow and steady as to escape notice, except by the occasional comparison of one period with another, whereas in truth an ounce or pound is worth much more at one time than another and in different places at the same time. The average price of Consols during thirty years is shown to be 93 $\frac{3}{8}$, yielding thus an annual interest of 3·24%. Now looking to the facts that the probability of having to sell or buy at a different price, and that the transfer occasions some small expense; we may strike off the odd ·24 and say that in England gold lying

absolutely secure without chance of loss or gain is valued at 3 per cent. In France the average price has been 66·03, yielding 4·64 per cent., a difference due doubtless to unsettled state of government and other causes rendering it of some risk to hold such securities. But taking 3 per cent. as the absolute value of gold because the value of its representative, we find that during this period its price has varied as much as from 88 to 99 $\frac{3}{8}$; that is, a person parting with ninety-nine sovereigns at one time would only receive back eighty-eight at another, or *vice versâ*. A somewhat startling variation in a value which is thought to be fixed and unalterable. In France the range has been still greater, the same interest bearing security being at one time 53·65, at another, 79·52.

Then for temporary use—not dwelling upon the rise once or twice for a few days to 10 per cent.—the yearly averages have varied as much as from 2·15 to 7·50 in England, and from 2·25 to 6·50 in France, although for the whole period the average has been almost identical, 3·91 here, 4·04 there. Yet it has happened more than once that at the same time gold would purchase in the one place the same or equally good securities at prices yielding double the interest it would in the other. The variations in the German rates do not appear to have been so great, although they by no means show a constant value attaching to either gold or silver.

The causes of these fluctuations in value it would be out of place to consider on this occasion. All that is necessary to the argument as regards silver, is to show that the price of gold itself is so greatly subject to change that it never can be said to have any natural fixed value in relation to either the pound, silver, or any other commodity.

VII.—*Production and Depreciation of Silver.*

So large a space has been devoted to the consideration of the gold question, for the simple reason that having to deal with two elements, either of which or both together may be unstable, it is quite necessary to determine with some precision with which of the two the whole or the greater part of the instability rests. That it is not with gold to anything like such an extent as the very great depreciation in the gold-value of silver would point, seems to be pretty clearly established by the evidence already adduced. The way is thus prepared for considering the actual position in which silver now stands.

The annexed table shows the production of silver since 1852, as estimated by Sir Hector Hay, commencing with a yearly produce of about 8 millions, and ending with more than double that amount in the last few years, giving an average of some 10 millions per annum. If from this we deduct 2 millions as absorbed in the arts,

wear and tear, &c., the existing silver must have been increasing for the last thirty years at the rate of about 8 millions per annum. There seems to be great difficulty, more so than with gold, in arriving at anything like an accurate notion of the quantity of silver in coin or bullion which the world possessed, either in 1848 or 1879, and so to see what ratio the annual additions bear to the previous accumulation. Mr. Seyd estimates the amount in 1848 as 600 millions; but then allows for an increase of 50 millions only up to 1875, which is quite incompatible with the estimate of the successive additions of 8 millions in every year. For our present purpose, however, the actual amount dispersed amongst the various nations by whom it is used is not so important as the progressive growth in that quantity whatever it may be. Perhaps we are safe in setting the former amount at something like 500 millions, and if so the total increase must be about one half of that sum.

TABLE VI.—*Estimated Production of Silver in Each Year from 1849 to 1878, with Average Prices in London Market; Imports and Exports of United Kingdom; Exports to the East; and Bills Drawn on Indian Government for same Period.* [In million £'s to two decimals.]

Year.	Silver Produced.	Price, London.	United Kingdom.		India.	
			Imports.	Exports.	Exports to East.	Bills on Indian Government.
		<i>d.</i>				
1849.....	8'12	59 $\frac{3}{4}$	—	7'72	3'81	1'89
'50.....	8'12	60 $\frac{1}{16}$	—	4'37	5'05	2'94
'51.....	8'12	61	—	5'08	1'72	3'24
'52.....	8'12	60 $\frac{1}{2}$	—	5'97	2'45	2'78
'53.....	8'12	61 $\frac{1}{2}$	—	6'15	3'12	3'32
'54.....	8'12	61 $\frac{1}{2}$	—	6'03	3'10	3'85
'55.....	8'12	61 $\frac{5}{16}$	—	6'98	6'43	3'67
'56.....	8'13	61 $\frac{5}{16}$	—	12'81	12'11	1'48
'57.....	8'13	61 $\frac{1}{4}$	—	18'51	16'73	2'82
'58.....	8'13	61 $\frac{5}{16}$	6'70	7'06	4'75	'63
'59.....	8'15	62 $\frac{1}{16}$	14'77	17'61	14'83	'03
'60.....	8'16	61 $\frac{1}{16}$	10'39	9'89	8'48	—
'61.....	8'54	60 $\frac{1}{2}$	6'58	9'57	6'82	—
'62.....	9'04	61 $\frac{7}{16}$	11'75	13'31	10'10	1'19
'63.....	9'84	61 $\frac{3}{8}$	10'89	11'24	8'26	6'64
'64.....	10'34	61 $\frac{3}{8}$	10'83	9'85	6'25	8'98
'65.....	10'39	61 $\frac{1}{16}$	6'98	6'60	3'60	6'79
'66.....	10'14	61 $\frac{1}{8}$	10'78	8'90	2'37	7'00
'67.....	10'85	60 $\frac{9}{16}$	8'02	6'44	'64	5'61
'68.....	10'04	60 $\frac{1}{2}$	7'72	7'51	1'64	4'14
'69.....	9'50	60 $\frac{7}{16}$	6'73	7'90	2'36	3'71
'70.....	10'90	60 $\frac{9}{16}$	10'65	8'91	1'58	6'98
'71.....	11'00	60 $\frac{1}{2}$	16'52	13'06	3'71	8'44
'72.....	11'20	60 $\frac{5}{16}$	11'14	10'59	5'65	10'31
'73.....	12'20	59 $\frac{1}{4}$	12'99	9'83	2'50	13'94
'74.....	12'90	58 $\frac{5}{16}$	12'30	12'21	7'09	13'29
'75.....	13'40	56 $\frac{7}{8}$	10'12	8'98	3'71	10'84
'76.....	14'80	52 $\frac{3}{4}$	13'58	12'95	10'91	11'51
'77.....	16'10	54 $\frac{1}{16}$	21'71	19'44	17'00	8'64
'78.....	14'70	52 $\frac{9}{16}$	11'55	11'72	5'84	13'97

The same table shows the average prices in London, per ounce of standard silver, for each of the last thirty years, beginning with $59\frac{3}{4}d.$ in 1849, and ending with $52\frac{9}{16}d.$ for 1878. Since then there has been a further reduction, until the last price quoted to-day is $50\frac{1}{8}d.$ Side by side with these will be found the silver imports and exports to and from the United Kingdom, the exports to the East, and the amount of bills drawn at home on the Indian Government, all of which particulars present features of interest, although their sequence is not so regular or so closely following either production or price as to establish any law of intimate connection with either the one or the other. The column of price shows that between 1849 and 1872 there was no very great variation from $59\frac{3}{4}d.$; in the earlier years it rose by slow degrees as high as $62\frac{1}{8}d.$, in 1859, having in the months of March and July been $62\frac{3}{4}d.$ (the highest price ever quoted), and then by almost equally regular descent reached $60\frac{5}{16}d.$ in the latter years, the average of the whole period having been $61d.$ It is evident, therefore, that neither the increasing rate of production, nor the varying rates of movement to and fro, nor yet the absorption by the East, have exercised any regular or constant effect upon the price. All these and many other causes must have each had their specific influence, but want of uniformity in their occurrence neutralising each other, no marked result followed. We must look then for some other cause or causes to account for the marked and rapid decline which has been going on since then. In six years, without reckoning the further changes of the present year, the fall has been from $60\frac{5}{8}$ — $61\frac{1}{8}$ in January, 1872, to $49\frac{1}{2}$ — $50\frac{1}{16}$ in December, 1878, equal to $10\frac{3}{4}$ in seven years, or an average of $1\frac{1}{2}$ per annum, being 21 per cent. altogether, or 3 per cent. yearly.

In the opinion of the committee of the House of Commons, this fall is due to three principal causes:—

1st. "The greatly increased yield from the new mines in "Nevada," to which all the increase in production since 1870 is to be attributed.

2nd. "To the introduction of a gold currency into Germany," which commenced at the end of 1871. The total amount of silver which it is estimated has thus to be withdrawn, when the operation is complete, is 48,000,000*l.*, of which probably 30 to 35 millions has been already sold.

3rd. "To the decreased demand for silver for export to India." From a paper laid before the committee by Mr. Waterfield, it would appear that the surplus of imports of silver into India in periods of ten years have been:—

	£
1835-36 to 1844-45	20,534,669
'45-46 „ '54-55	15,327,009
'55-56 „ '64-65	100,202,612
'65-66 „ '74-75	62,400,060
'75-76 „ '77-78	21,873,207
	<hr/>
	220,337,557

Comparing the six years 1866-72, with the same number since that, we shall find—

	Average.
1866-72	5,988,860
'72-78	4,945,240
	<hr/>
	1,043,620

To these the committee add three other causes :—

1st. The substitution of gold for silver in their currency by the Scandinavian Governments, which is estimated to have caused the withdrawal from employment of 1,800,000*l.* between 1873 and 1876.

2nd. The suspension of silver coinage by the Latin union.

3rd. The temporary prohibition of silver coining in Holland, by which some 4,000,000*l.* of gold has been substituted.

These several causes have been so fully entered into, that it may be sufficient here to state the estimate of their collected amount of silver thrown out of use during the last six years, to be from 40 to 50 millions.

Now giving full weight to this amount, and likewise to the fear of effects yet to be produced by the further sale of German silver, these causes seem insufficient to account for the depreciated value at which silver now stands, and I would venture to add some other results of the altered condition of monetary affairs.

1st. The hoarding of money which was formerly common has very much ceased, both in our own and other countries, especially in France, in consequence of the great increase in banking facilities, and still more in the creation of numerous interest-bearing securities which are available for persons of but limited means. The vast increase in the deposits in our own savings banks, and the number of small holders of French Government stock which the system of the Emperor Napoleon introduced, are but two instances of this change.

2nd. Here and doubtless elsewhere, shopkeepers and petty tradesmen as well as the larger dealers and merchants now have banking accounts, to which at short intervals they carry their receipts, and from which they draw by cheques, which are many of them interchanged without the use of coin, the sums required for paying their accounts. Everybody now seems anxious to get

rid of coin as soon as received, and the saving thus induced must vastly economise the employment of both gold and silver.

3rd. The great accession to the stock of gold in the world cannot fail to have its effect upon the employment of silver also. The greater convenience which the superior metal has for all uses excepting that of small change, must tend very much to circumscribe the use of the inferior. This is greatly enhanced by the extension of postal telegraph and railway communications which render the transport of coin or bank notes so much more rapid and easy, especially of gold or notes, which occupy little space and are easily moved, whilst silver is cumbrous and therefore difficult of transfer from one place to another. Now if it be true, as previously asserted, that the quantity of the precious metals in the world is at present greater in proportion to the uses they have to serve, the weightier and less valuable of the two is sure to be the first to be disused where any option exists. So far from there being any scarcity of gold which should cause an appreciation of its value in relation to silver, there appears to be good ground for believing that a plethora of it exists. It fails to depreciate in value, because it thrusts out silver from use as money and tends more and more to reduce it to the condition of a commodity. Herein probably consists a very potent cause for the overstocking of the silver market, and hence the diminishing price in gold which can be obtained for it.

VIII.—*Depression of Trade.*

It is impossible not to notice the coincidence in point of time of the decay in the value of silver with the earlier stages of that depression in trade of which it is much to be feared we are far from having reached the culminating point. Messrs. Pixley and Abel's circular remarks on the year 1872, "commencement of decline in price of silver," and the remarks at foot will be found in articles on the trade of 1873, furnished by myself to "Lloyd's "List."*† It was not till the latter half of the year that silver began

* "The conclusions to be drawn from the facts disclosed in these returns, when viewed in connection with the diminution in our exports which has been for some time slowly advancing, are by no means consolatory or reassuring. It is evident that we have commenced to buy less of the materials on which our great manufactures depend; and that as we sell less and less of these we must diminish still further the imports we can afford to purchase; also, that just in proportion as we purchase less, the countries from which we take these products will be the less able to buy the articles into which we manufacture the raw materials. Meantime we are largely and continuously adding to our receipts of articles for food, the cost of which is so much loss to the nation if we cannot find employment for the working power which this food sustains; or if the price at which that labour is obtained be so enhanced as to render its employment unprofitable."—*30th July, 1873.*

† "It is barely possible that the conclusions arrived at by a cursory study of these returns may be somewhat modified on more matured consideration of the

to fall, nor till the middle of the following year that it assumed any serious proportions, and bearing in mind that it is frequently some months before any change becomes manifest in the official trade accounts, it is clear that silver, the imports of materials for manufacture, and the exports of manufactured articles, all began to decline in price or quantity about the same time. It is to be noticed too, that silver depreciation preceded its demonetisation by the German Government by some months, although it is probable that the anticipation of this action may have exercised an influence prior to its actual performance. It would be out of place here to go over the same ground as regards imports and exports that has been travelled before, but it must be remarked that the growing balance of trade against us in each year from 1872 to 1877, would prevent silver being sent to us in payment for other goods. It would come here either in exchange for gold procured by the sale of securities, or on consignment for sale, and thus like any other commodity for which the demand is slack have to suffer in value.

The direct effects of this silver depreciation upon the trade and financial condition of our own country are not so serious as its indirect results. Our own standard being a gold one, and silver being used only for tokens passing at an artificial value by legislative enactment, no loss on our money is sustained; but the Mint gains on the metal converted into coin to the full extent of the lower price at which it can be purchased. There are never very large stocks in the hands of British holders, and it is probable that the bullion merchants and speculative dealers have realised quite as much profit from fluctuations downwards as they would if the direction had been different. No doubt loss ensues wherever contracts exist which have to be met by receipts of silver, and trade must be impeded in silver-using countries by the necessity of charging higher for the goods we sell to meet the difference in exchange; but as it does not appear that the prices of articles purchased for the home market have greatly risen in their silver value, there would on these be a corresponding gain.

fuller information to be furnished in the 'Annual Statement of Trade;' but thus far there appears nothing to remove the impression—that our extending importation of articles to be consumed as food, unaccompanied by an increased exportation of our own produce and manufacture, cannot be a satisfactory condition of trade. So far as the importations of articles necessary for the sustenance of our population are concerned, unless that food be transformed into some tangible productions of the labour it feeds, with which to pay for its cost, there is to that extent a loss of national wealth; and the same remark may apply in some measure to those articles which, not strictly necessary as food, enter largely into consumption. The increased sale for these may indicate, as doubtless it does, the possession by the labouring classes of greater means for enjoyment and personal gratification, but unless our producing power is employed as well as maintained, the supply of these means must fail, and our importations as well as our exportations will decline both in quantity and value."—*26th January, 1874.*

As regards India, up to March, 1877, neither the Viceroy there, nor the India Office here, seem to think that the purchasing power of the rupee had become less, "The relative values of gold and silver not having varied in the same proportion as elsewhere;"* and though "the silver prices of imported goods had not risen," this may be accounted for by the fall in the price of their first cost. The Indian finances however have suffered most grievously from the revenue having to be collected in silver, and so large a portion of it having to be paid in gold or its equivalent in England. The bills drawn last year upon India by the Government to meet the expenditure upon Indian account in this country amounted to 14,000,000*l.*, and the fall from 60½ to 52⅞, represented a depreciation of 13 per cent., making an actual loss to the Indian revenue of nearly 2,000,000*l.* for the one year only, whilst the estimate for the coming year is nearly double that sum. On official or private persons having to remit money either in specie or bills, the same sacrifice is entailed.

So far as concerns internal circulation in countries where the silver standard exists, it matters little what the price of silver in other places may be, but on whatever amounts they have to export to countries having a gold standard, a loss must ensue, and that not only on the actual transmission of the silver, but on all transactions for which it is the standard, or rather upon the balance between the imports and exports. India suffers to the extent that she has to remit money to this country; but it must be remembered that as between the mother country and herself there can be no absolute loss, and India as a country whose exports exceed its imports (as shown in the following figures), should gain an equivalent for the loss on remittances, and in addition benefit by all payments from this side:—

[In million £'s to two decimals.]

	Imports.	Exports.	Surplus Exports.
	£	£	£
1854-59 (average)	14'83	23'99	9'16
'60-65 (")	24'67	46'46	21'79
'66-71 (")	32'96	53'18	20'22
'72.....	32'09	63'19	31'10
'73.....	31'87	55'24	23'37
'74.....	33'82	55'00	21'18
'75.....	36'22	56'36	20'14
'76.....	38'89	58'05	19'16
'77.....	37'44	60'96	23'52

Either the rupee has retained its purchasing power or become depreciated. If the former, it will purchase the same quantity of

* Parliamentary papers relating to silver, 22nd March, 1877.

goods which—were no other cause in existence—would sell here for as many sovereigns as before, and purchase a greater number of rupees or weight of silver. If the latter, then labour and produce must obtain more rupees; and taxation being levied in rupees, its burden must be correspondingly lightened. It will be observed that the surplus of exports exceeds the remittances that have to be made. The whole question would thus ultimately resolve itself into an adjustment of wages, prices, and taxes, to fit the altered value of money, were it not for the fact that India seems to be yearly growing poorer and less able to bear the charges for its government and expenditure.

I am aware that far greater evils than these are assigned to this depreciation by a large number of thinkers and writers on this subject. The limits of this paper will not permit a consideration of the various arguments by which it is attempted to be proved that the decline of our exports, the fall in prices, and the general depression of trade, are all due to the altered relation in the value of gold and silver, and to the folly of our Government and others in not agreeing to a fixed and unalterable ratio of value between the two metals. They seem to me to rest upon the fallacy that money, rather than the wants, be they real or artificial, of mankind, creates trade, and that you have but to stamp the one metal with an effigy which shall give it a certain value in another metal, to promote an almost unlimited growth and interchange of the products of industry, and thus enhance the welfare of nations. I cannot but think that whilst a sufficiency of the circulating medium, be it in precious metals, bank notes, or other securities which pass readily from hand to hand, economises labour, and so adds to the wealth of the world; the real prosperity alike of individuals and nations depends upon the judicious use they make of their productive powers, and the right expenditure or consumption of the products thus created.

IX.—*Bi-metallic and other Theories.*

Did this paper profess to be an exhaustive one, it would be necessary to take up the various propositions which have been made for dealing with the difficulties arising from the existing depreciation, or providing against their aggravation in the future. Pretending, however, only to deal with some portions of a subject far too vast to be disposed of in a short paper, this branch of it might be passed by. Yet a few remarks will probably be expected, and can hardly be omitted. Two classes of suggestions are offered, the one having for its object the restoration of value to silver by fixing its relation to gold at a higher ratio than at present, such a proportion as till recently it enjoyed the other, that of obviating

the inconveniences of a fluctuating standard and a varying state of the exchanges, by the substitution of one that may be fixed. The views of one side favour the adoption of the bi-metallic standard or even the demonetisation of gold; those of the other, the universal acceptance of a gold standard, or such measures as would lead to its ultimate adoption.

The great objection to the bi-metallic system is that it must rest upon an arbitrary valuation of the two metals, which would with difficulty be maintained in the home circulation, and could not be permanently upheld in the international use of money. Its establishment requires that both metals should be a legal tender within the limits of every State, and therefore renders the choice of metal for the discharge of obligations dependent upon the will of the payer, who, in selecting the coin most convenient for himself, might not always choose that most acceptable to the recipient. The simple difference, in bulk rendering transport difficult, and in the number of coins to be counted or weighed, would in most circumstances be to the advantage of gold and ensure a small premium in its favour. Under other conditions silver might be preferable, and its holder be enabled to dictate the terms on which he would part with its possession.

A striking proof of the impossibility of maintaining any definite ratio of value between gold and silver, is to be seen in the present accumulations of British silver coin in the hands of bankers and other holders. Owing to the reduced expenditure on wages and the lesser amounts required for the purchase of articles of consumption, it becomes difficult to dispose of large quantities and a commission is charged on its transfer. This is virtually a fall in value, notwithstanding that its worth in relation to the sovereign is unaltered. It may be said that this results from silver not being made a legal tender to any amount, but the same condition would arise whenever the one metal or the other—almost always silver—was found to be in excess of the requirements for its employment.

Without entering upon other details or producing illustrations, it must be evident that in a country under such monetary conditions as ours, the mere possibility of being forced to transact business in the more cumbrous metal would be intolerable. The necessity imposed upon bankers and others of providing a sufficient supply of both to meet all demands would be adverse to economy in the use of money, thus both adding to the expense and raising impediments to the settlement of business transactions. Here, practically, no more silver would get into circulation, but much more would have to be kept in reserve at the Bank of England and the Mint, either of whom might be called upon to meet large or sudden

demands. Nothing can work better than our system of restricting the use of silver by its limited circulation as a token at an artificial value, and making gold, or notes whose convertibility is secure, legal tenders for all but trifling amounts. Other nations, even where the standard is silver, are finding the convenience of our system, and the use of gold in preference to the heavier metal is becoming more desirable every day.

The introduction of such a system into our coinage could only be effected in one of two ways, either by replacing our present coins by others of such a standard value as might be agreed upon with other nations, say $15\frac{1}{2}$ to 1, or by the addition to it of new full value pieces of such a size as would keep them distinct from the token coins now current, say those of four or five shillings—the fifth or fourth of the pound sterling—which should contain the requisite amount of pure metal to make them equivalent to gold in all transactions either at home or abroad. In our present coinage twenty shillings contain 1,614 grs. of pure silver; those proposed would require 1,753, an excess of rather more than $8\frac{1}{2}$ per cent. They would absorb, if the estimate of 20 millions as the amount in circulation be correct, at least a million and a-half of money, besides all the expense of recoinage, should new pieces be substituted for the old. It is difficult to see what advantage as regards internal circulation could arise from either course, or what difference it would make in the exchange with other nations, over the use of bar silver which now passes freely from one country to another. The advancement of the price of silver in the hands of British holders, whether as coin, bullion, or plate would be a decided gain; but for this would be sacrificed the favourable standing given us by the gold standard in the face of the diminishing production of that metal and the increasing supplies of silver. Should these continue or be extended, and we had the double standard, a drain of gold would most certainly ensue, which would prove embarrassing in the extreme.

The great difficulty with which we have to contend is India. Mr. Seyd's proposition, ingenious as it is, to introduce a new silver coin of 350·625 grs. fine, which should be declared equivalent in value to four shillings, or one-fifth of the pound sterling, is avowedly dependent for its success upon a general agreement for a bi-metallic currency on the basis of $15\frac{1}{2}$ to 1. Colonel Smith's plan, of stopping the coinage of rupees until by their scarceness they had attained the artificial value of two shillings, concurrently with the introduction of a ten-rupee gold piece identical with the English sovereign, establishing a still higher ratio of 14·6 to 1 (which is the intrinsic value of our present English silver coins), could never be maintained unless other nations agreed to adopt it; since

however possible it may be to keep a limited amount of token coinage in circulation, as we do here, it would be utterly impossible to maintain it for the whole currency of a nation.

Mr. Hendriks's proposal for the introduction of a ten-rupee gold coin worth $\frac{1}{11}$ ths of the sovereign, and an alteration of the silver rupee to 11 per cent. less pure silver than at present, seems hardly practicable in the face of the present reduced price of the metal.

Now all these schemes, as well as the new American dollar, and various other arrangements, seem to be based upon the fallacy that it is possible by any agreement or law, to fix an unalterable ratio between two substances the circumstances of whose production and employment are subject to constant variations. We have seen how impossible it is to maintain an equilibrium in the value of gold at different times, or even in different places at the same time. It is therefore scarcely too much to assert that the attempt to do so with silver must inevitably fail; for although the internal relation may be enforced by law, the conditions of different countries are so diverse and fluctuating, that each one in its external relations must be subject to ever-changing adaptations, suited to the position of affairs at the moment when the exchanges of commodities, securities, or bullion require to be effected.

The true wisdom would therefore appear to be found in every country having but a single standard. For facility of intercourse with other countries it would be well if that standard were the same for all, and until some other substance of superior fitness be found, everything points to the conclusion that the best standard is gold. It does not however at all follow that it would be wise for every nation to imitate the example of the German Government by changing from the one metal to the other. The existing stocks of gold are clearly insufficient to supply the wants of the world should this be done, and at the present price of silver, to say nothing of that to which it would fall if it were everywhere demonetised, such a step would entail heavy and ultimately ruinous loss upon the countries making the change. Sound policy would seem to dictate that each country should, for the present at least, maintain its existing standard, and that all should put up with the inconveniences, and even loss, which the diversity occasions. Least of all would it be wise for England to forego the advantage she herself possesses in her gold standard, her convertible notes, and her subsidiary silver and copper coinage. For India, she should wait her time for the introduction of gold, and meanwhile, hard as it is upon that country to be fettered by engagements to pay in gold, or according to the gold standard, large sums which are collected in silver, it really only amounts to a failure of revenue

such as might have arisen from other causes, and is a far lesser difficulty than she will have to cope with when, as it assuredly must, and that at no distant date, her opium revenue is extinguished.

It will be asked then, is nothing to be done? Are all the distresses and inconveniences, public and private, pertaining to the present state of things to be unmitigated? Are all the derangements in mercantile affairs to continue as they are? The answer to such questioners is two-fold. Firstly: let us see any remedy proposed which does not create a disease far worse than the one it professes to cure. Secondly: Is there any need for action? Will not time and patience bring round a recovery? The depreciation of silver commenced with the adverse turn in the balance of our trade, and I firmly believe that when trade recovers from its present depression, such abundant use will be found for all the silver as will restore it to its former relation to gold; and then the substitution of a gold for a silver standard in India, though it will not effect any stable relation of the one to the other, will obviate much of the inconvenience resulting from the want of a uniform standard for every portion of the same empire. It would be absurd to say that such a restoration may not be retarded, advanced, or even defeated altogether by some new discoveries or increased production of either the one metal or the other, but supposing the supplies to continue at the present rate, or not greatly to vary from it, either the opening up of new markets amongst a poor or uncivilised people, or the dispersion of a large number of our population to open up new colonies or extend the old ones, will call into use quite as much small change as will absorb all the silver yet available, and thus correct the evil which is now the source of so much disquietude.

X.—*Concluding Remarks.*

Shortly to recapitulate the several phases of this question which have thus passed under observation.

I. That basing our calculations upon the best estimates which can be obtained of the annual production of gold and silver, and comparing the assumed stock of gold with the movements of bullion and merchandise throughout the world, there appears no reason to suppose that the existing supply is not amply sufficient for all the purposes of trade as at present carried on.

II. That the general fall of prices in recent years has neither been so regular nor so closely connected with the supply of gold and silver, as to prove that alterations in the purchasing power of the sovereign have been due wholly or chiefly to an appreciation of gold.

III. That the variations in the value of gold itself, as shown by

the fluctuations in the price of the funds, and the rates of interest charged for the use of money, prove that it has no constant or unalterable value.

IV. That in addition to the well-known effects on the value of silver arising from the growing yield of the American mines and the decrease in its use from its demonetisation by Germany; there are others resulting from the increased quantity of gold, the facilities for economising its use and its natural superiority to silver, sufficient to account in some measure for the depreciation of the inferior metal.

V. That the coincidence of the fall in the price of silver with the contraction and depression of trade, renders it probable that in this is to be found the most potent cause of depreciation, and that the revival of trade will in all probability be accompanied by a restoration of its value.

VI. That it is not likely that any agreement to establish a fixed ratio in the value of silver to gold could ever be permanently maintained, or not be liable to disruption at any moment from causes incapable of regulation or control.

VII. That it is a fallacy to suppose that the extent of trade and consequently the value of the medium through which its transactions are settled, depends so much upon the quantity of money in existence as upon the assiduous and judicious employment of productive power, the thrift by which its products are accumulated, and the wisdom which governs their consumption or expenditure.

In conclusion, let me say that I offer the foregoing remarks and calculations in thorough consciousness of my own inability to deal with a subject of so much intricacy and so much gravity; but also with the full knowledge that honest labour, however imperfect in its performance, never fails to be appreciated by the members of this Society, and the earnest hope that however little there may be in what I have written to enlighten those who are better informed than myself, it will be followed by a discussion instructive and interesting to all who may be present.

POSTSCRIPT.—Owing to the lateness of the hour at which the discussion terminated, there were a few points on which explanation was not given so fully as it might have been. The point raised by Mr. Giffen as to the meaning attached to the value of the pound, will be better seen if some other standard be assumed wherein to express the value of gold, say consols; we shall then speak of the

sovereign as worth 1·25 or 1·11 consols, to express what we now mean by the price of 100*l.* consols being 80 or 90. The difference between the two prices may result either from the rising value of the consols or the falling value of the gold. To which of the two it is due would depend upon whether the ultimate cause lay with the one or the other. So with regard to the altered prices of articles: in practice it matters not how it comes to pass that the sovereign purchases more or less, but in theory, and therefore in relation to other articles, everything depends upon which of the two it is that has changed its circumstances so as to produce the alteration. Political and other causes influence the value of stocks and shares, but not to the whole or principal part of the variation in price. This is oftener due to the present abundance or scarcity of gold, which really rises or falls in value just as silver or any other article does. So with the price of goods. The change may be either with them or with the gold, and to ascertain in which it has taken place is essential to the discovery of the cause, the provision of a remedy, or the forecasting of the future.

Considerable difficulty arose on the consideration of Mr. Giffen's paper (last number of *Journal*), from the disparity of results in his comparison between two years and those which were then stated in brief, and are now shown in detail [Appendix E]. The one set of calculations was between 1873 and 1877, the other between 1872 and 1878, and it so happens that there was a rise of price in many articles in 1873 and a fall in 1878, but in *both* of these years a considerable fall in quantity. It was in the latter part of 1872 that the coal famine set in, producing in 1873 an abnormal price for that article, and the many dependent upon it. Thus comparing the exports for the two years:—

	1873.		Over 1872.		Amount of Altered Value Due.	
	Tons.	Price.	Tons.	Price.	To Quantity.	To Price.
		£		£	£	£
Coals	12·63	13·21	— 0·57	+ 2·77	— 0·45	+ 3·22
Pig iron	1·14	7·08	— 0·19	+ 0·37	— 0·96	+ 1·33
Railway iron	0·79	10·43	— 0·16	+ 0·20	— 1·72	+ 1·92
	—	30·72	—	+ 3·34	— 3·13	+ 6·47

Thus when measuring the two years by total value, the increase of price conceals the decrease in quantity, and as these two articles alone represent one-sixth of the whole of the exports dealt with in Mr. Giffen's table, they cover a large portion of the difference. The same cause operated to some extent to throw out the calculations for 1872 in the other table [Appendix E]. But for these

inflated prices the decrease on "Total British Produce" there shown as 45·26*l.*, would have been 10·36*l.* less. Again, for coals and iron, together with the diminished cost of the imported raw material from which many of the articles are manufactured, would cause a shrinkage in value, and thus lessen the total to be brought into comparison with the diminution due to quantity. Making due allowance for these causes, it is proved that of the lower total value of the British exports in 1878 as compared with 1872, two-fifths, if not one-half, represent an absolute falling off in *quantity*,* and as this cannot by any possibility indicate an appreciation of gold, it may not be assumed that the falling off in prices proves any alteration to have taken place in the value of gold. That fall in price is amply accounted for by the unwillingness or the inability of other nations to purchase our manufactures to the extent they formerly did, and the necessity under which we are placed of giving a larger quantity for the money in order to effect sales at all.

It should also be remarked, in answer to one of the questions, that in the foreign accounts of the gold and silver production, ounces are converted into dollars at a fixed rate, and dollars into pounds sterling at the nominal value of 4*s.* each, so that the estimates really present a proper basis for the comparison of quantities. Rupees also into sterling at 10 to the £.

An additional table [Appendix A], in compliance with Mr. Giffen's suggestion shows the countries whose production is estimated in Table I (p. 409), whilst [Appendices B and C] divide in like manner the values of bullion and merchandise in the same table.

* Mr. Giffen, to whom this note has been shown, states that if 1872 had been compared with 1877, the result would have been much the same as in the comparison which he gave between 1873 and 1877, which showed hardly any decrease in the quantities of the exports. As the additional decline in value in 1878 as compared with 1877 was inconsiderable, amounting only to 6,000,000*l.*, or about 3 per cent. on the trade of 1877, it is impossible that the falling off of the quantities of the exports in 1878 as compared with 1872 can have been anything like two-fifths or one-half of the total apparent falling off of the trade as measured by the reduction in values. Mr. Giffen is quite unable to account for Mr. Bourne's arriving at the above conclusion. When the 1878 figures are published it will be easy for any one to apply the prices of 1872 to the quantities of the exports in 1878, and see how much of the falling off is due to a reduction of quantity, and how much to a decline of price.

APPENDIX.

A.—Production of Gold and Silver throughout the World (Corrected as regards the United States from the "Financial Review", published in New York, 1879). Sir Hector M. Hay.

[In millions to two places of decimals.]

Years.	Gold.						Silver.				Total Gold and Silver.
	Australia.	United States.	Mexico and South America.	Russia.	Other Countries.	Total.	United States.	Mexico and South America.	Other Countries.	Total.	
1852....	20'60	12'00	1'00	2'45	0'50	36'55	—	6'00	2'12	8'12	44'67
'53....	14'14	13'00	1'00	2'45	0'50	31'09	—	6'00	2'12	8'12	39'21
'54....	9'54	12'00	1'00	2'45	0'50	25'49	—	6'00	2'12	8'12	33'61
'55....	12'07	11'00	1'00	2'45	0'50	27'02	—	6'00	2'12	8'12	35'14
'56....	14'27	11'00	1'00	2'75	0'50	29'52	—	6'00	2'13	8'13	37'65
'57....	11'41	11'00	1'00	2'75	0'50	26'66	—	6'00	2'13	8'13	34'79
'58....	10'68	10'00	1'00	2'75	0'50	24'93	—	6'00	2'13	8'13	33'06
'59....	10'82	10'00	0'90	2'75	0'50	24'97	0'02	6'00	2'13	8'15	33'12
1860....	10'50	9'20	0'90	2'75	0'50	23'85	0'03	6'00	2'13	8'16	32'01
'61....	9'76	8'60	0'90	3'00	0'50	22'76	0'40	6'00	2'14	8'54	31'30
'62....	9'35	7'84	0'90	3'00	0'50	21'59	0'90	6'00	2'14	9'04	30'63
'63....	8'88	8'00	0'90	3'11	0'50	21'39	1'70	6'00	2'14	9'84	31'23
'64....	9'13	9'22	0'80	2'95	0'50	22'60	2'20	6'00	2'14	10'34	32'94
'65....	8'82	10'64	0'80	3'28	0'50	24'04	2'25	6'00	2'14	10'39	34'43
'66....	8'84	10'70	0'80	3'38	0'50	24'22	2'00	6'00	2'14	10'14	34'36
'67....	7'91	10'35	0'70	3'35	0'50	22'81	2'70	6'00	2'14	10'84	33'65
'68....	7'64	9'60	0'60	3'60	0'50	21'94	2'40	5'50	2'15	10'05	31'99
'69....	6'31	9'90	0'50	4'03	0'50	21'24	2'40	5'00	2'10	9'50	30'74
1870....	7'70	6'70	0'50	4'50	0'50	19'90	3'40	5'50	2'00	10'90	30'80
'71....	8'60	6'80	0'70	4'50	0'50	21'10	3'80	5'20	2'00	11'00	32'10
'72....	7'30	7'60	0'70	4'50	0'50	20'60	4'00	5'20	2'00	11'20	31'80
'73....	7'80	7'80	0'70	4'50	0'50	21'30	5'40	4'80	2'00	12'20	33'50
'74....	5'90	7'70	0'80	4'50	0'50	19'40	5'90	5'00	2'00	12'90	32'30
'75....	5'70	8'00	0'80	4'50	0'50	19'50	6'40	5'00	2'00	13'40	32'90
'76....	4'50	8'50	1'00	4'50	0'50	19'00	7'80	5'00	2'00	14'80	33'80
'77....	4'50	8'90	1'00	4'50	0'50	19'40	9'10	5'00	2'00	16'10	35'50
'78....	4'00	7'80	1'00	4'50	0'50	17'80	7'70	5'00	2'00	14'70	32'50
	246'67	253'85	22'90	93'75	13'50	630'67	70'50	152'20	56'36	279'06	909'73

B.—Value of Imports and Exports of Coin and Bullion from and to the Principal Countries in each Year, from 1860-77.

[In million £'s to two places of decimals.]

Year.		Russia.	Hambro.	Holland.	Belgium.	France.	Italy.	Austria.	United States.	United Kingdom.	British Possessions.
1860	I	1.12	4.90	1.07	5.39	24.17	—	3.36	1.78	22.97	18.95
"	E	1.04	—	0.84	9.18	17.90	—	5.53	10.68	25.54	12.54
1861	I	1.12	6.20	0.63	4.41	16.90	0.01	2.84	6.73	18.75	14.12
"	E	2.46	—	1.79	5.89	20.43	0.05	3.19	5.87	20.84	13.60
1862	I	0.79	7.81	1.25	2.08	23.04	0.01	2.41	3.42	31.66	19.51
"	E	5.96	—	0.73	8.23	19.78	0.04	3.26	7.68	29.33	14.01
1863	I	0.82	10.22	1.27	1.30	23.91	0.01	3.08	2.00	30.03	25.04
"	E	10.69	—	1.36	9.83	26.14	0.02	3.07	3.37	26.54	15.12
1864	I	0.82	8.65	0.94	2.14	32.59	0.01	1.80	2.73	27.73	31.21
"	E	4.53	—	2.90	7.02	29.29	0.01	2.82	21.96	23.13	18.09
1865	I	0.54	8.69	1.46	2.64	27.17	—	2.25	2.04	21.46	26.97
"	E	3.74	—	0.89	0.95	20.26	0.03	2.10	14.13	15.09	15.66
1866	I	0.47	7.94	1.48	5.55	43.84	0.05	2.73	2.23	34.29	33.01
"	E	4.53	—	1.01	3.71	24.88	0.19	5.10	17.93	21.64	17.62
1867	I	5.31	7.00	1.44	2.36	34.56	0.06	2.63	4.60	23.82	19.83
"	E	2.25	—	1.09	1.26	11.27	0.31	3.91	12.68	14.32	17.32
1868	I	6.22	5.44	1.98	2.09	28.60	0.02	3.32	2.96	24.85	19.14
"	E	0.92	—	0.50	1.29	15.75	0.06	3.90	19.54	20.22	18.01
1869	I	0.42	2.75	0.43	4.17	28.62	0.06	3.99	4.13	20.50	21.21
"	E	2.48	—	1.37	1.97	14.40	—	2.70	11.90	16.37	17.17
1870	I	0.43	3.17	3.48	7.13	17.96	0.05	4.12	5.50	29.46	19.27
"	E	3.78	—	1.45	2.82	12.10	0.04	3.42	12.12	18.92	16.02
1871	I	1.18	13.15	3.33	12.28	12.70	0.09	6.00	4.43	38.14	13.99
"	E	2.80	—	0.58	6.00	20.26	0.44	5.60	20.51	33.76	18.37
1872	I	2.06	15.24	1.40	14.40	15.81	0.16	3.66	2.86	29.61	19.37
"	E	1.25	—	1.63	3.65	13.83	0.20	6.62	16.64	30.34	15.45
1873	I	3.25	11.48	1.55	55.82	25.28	1.02	5.04	4.48	33.60	11.06
"	E	2.32	—	1.30	52.25	22.37	0.07	4.06	17.63	28.90	16.90
1874	I	2.63	3.29	1.68	7.84	39.94	0.39	2.17	5.93	30.38	12.20
"	E	2.77	—	0.10	3.27	8.26	0.29	2.07	13.88	22.85	15.77
1875	I	1.02	12.30	2.57	13.58	37.74	0.34	1.68	4.35	33.27	14.45
"	E	4.44	—	0.24	2.52	11.42	0.46	1.95	19.19	27.63	14.47
1876	I	0.85	7.57	1.45	3.79	35.42	0.84	3.82	3.32	37.05	11.36
"	E	16.35	—	0.32	2.41	9.35	0.37	3.59	11.77	29.46	13.41
1877	I	1.62	21.14	1.25	4.40	29.92	0.74	—	8.49	37.15	—
"	E	2.95	14.33	0.97	3.81	8.31	6.92	—	11.68	39.80	—
Total—											
Imports		30.67	156.94	28.66	151.37	498.17	3.86	54.90	71.98	524.72	330.69
Exports		75.26	14.33	19.07	126.06	305.70	3.50	62.89	249.16	444.65	269.53

C.—Value of Imports and Exports of Merchandise from and to the Principal Countries in each Year, from 1860-77.

[In million £'s to two places of decimals.]

Year.	Russia.	Hambro'.	Holland.	Belgium.	France.	Italy.	Austria.	United States.	United Kingdom.	British Possessions.
1860 I	24·00	40·85	36·61	36·93	106·29	—	32·07	73·67	210·53	79·99
„ E	29·00	—	31·55	35·13	125·90	—	37·67	69·49	164·52	65·12
1861 I	25·13	39·75	38·47	38·58	123·42	36·93	33·90	60·27	217·49	78·87
„ E	27·13	—	31·64	38·82	106·41	22·31	37·19	45·74	159·63	71·69
1862 I	22·72	40·26	35·88	40·95	115·97	36·61	35·53	39·45	225·72	87·92
„ E	27·69	—	31·05	37·48	122·00	26·30	40·93	39·72	166·17	79·50
1863 I	22·95	45·18	35·60	42·29	129·46	39·28	37·96	50·70	248·92	93·53
„ E	28·68	—	29·87	39·49	141·06	38·00	41·66	42·59	196·90	96·32
1864 I	25·84	49·33	38·58	50·17	136·30	43·70	37·77	65·93	274·95	107·21
„ E	28·53	—	33·21	46·89	156·85	25·27	44·63	33·09	212·62	121·68
1865 I	24·57	49·19	40·25	54·60	141·10	40·95	37·24	49·74	271·07	101·54
„ E	32·13	—	35·70	48·17	163·46	24·50	45·01	34·59	218·83	125·87
1866 I	31·00	50·49	42·60	57·05	153·80	36·64	29·02	90·59	295·29	105·79
„ E	33·58	—	35·37	52·94	171·24	26·53	40·18	33·77	238·91	125·33
1867 I	39·97	54·45	44·57	59·10	161·23	38·55	40·89	82·45	275·18	95·37
„ E	36·13	—	36·35	51·91	157·37	32·57	52·19	60·91	225·80	96·24
1868 I	41·31	55·91	46·21	64·82	170·33	39·43	55·36	74·47	294·69	107·37
„ E	35·88	—	39·04	56·39	148·84	34·98	59·65	58·74	227·78	112·31
1869 I	54·14	61·43	47·56	68·49	160·35	41·59	60·58	86·98	295·46	107·31
„ E	41·87	—	40·90	59·62	159·74	34·98	62·33	59·61	237·02	111·77
1870 I	53·19	52·28	51·09	70·41	139·91	39·82	62·97	90·83	303·26	105·42
„ E	56·99	—	43·50	60·87	138·23	34·19	58·91	81·83	244·08	112·83
1871 I	58·35	77·34	62·12	97·57	158·14	42·97	77·66	108·38	331·02	114·23
„ E	58·47	—	53·54	82·32	131·12	48·52	70·34	98·25	283·58	128·54
1872 I	68·92	85·62	50·09	92·81	180·06	52·10	84·74	130·54	354·69	126·68
„ E	51·78	—	38·78	84·01	190·26	51·34	62·19	92·54	314·59	143·24
1873 I	70·14	85·27	55·29	96·99	183·06	57·78	81·14	133·79	371·29	138·97
„ E	57·70	—	41·58	86·59	192·89	52·24	65·19	108·85	311·01	140·83
1874 I	74·65	84·33	54·28	90·34	176·90	56·76	82·29	118·21	370·08	144·13
„ E	68·37	—	42·25	82·81	188·08	43·74	70·35	122·14	297·65	140·15
1875 I	84·08	85·06	57·34	92·75	178·47	51·57	83·70	115·21	373·94	150·25
„ E	60·48	—	44·68	84·31	192·28	44·04	78·79	106·97	281·61	149·56
1876 I	75·62	85·22	58·00	98·42	196·35	56·60	79·10	96·00	375·16	146·81
„ E	63·47	—	44·10	83·34	181·90	52·41	78·15	112·58	256·78	152·31
1877 I	—	58·85	61·33	94·26	182·80	49·04	—	94·03	394·42	—
„ E	—	—	44·15	80·17	174·83	40·90	—	125·52	252·35	—
Total Imports	796·58	1100·81	855·87	1,246·53	2,793·94	760·32	951·92	1,561·24	5,483·16	1,891·39
Exports	737·88	—	697·26	1,111·26	2,842·46	632·82	946·36	1,326·93	4,289·83	1,973·29

D.—Table of the Principal Articles Imported into the United Kingdom in 1878—Quantity and Value—and Excess or Deficiency of same over 1872.

[In millions to two places of decimals.]

Articles.	Quantity.	Values.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.
			Quantity.	Value.	To Quantity.	To Price.	
I. FOOD AND CONSUMPTION.		£		£	£	£	
1. <i>Animal Food</i> —							
Oxen	No. 0'23	4'95	0'09	2'38	1'65	0'73	85'25
Sheep	" 0'89	2'17	0'08	0'50	0'16	0'34	84'33
Bacon and hams	cwts. 4'27	8'62	2'27	4'46	4'94	— 0'48	105'57
Meat, salted	" 0'74	1'46	0'28	0'55	0'49	0'06	95'89
" fresh and }	" 0'96	2'70	0'57	1'70	1'49	0'21	92'22
" preserved	" 0'57	1'21	0'16	0'60	0'24	0'36	70'18
Fish, cured	" 0'91	1'79	0'33	0'48	0'74	— 0'26	114'53
Lard	" 6'53	2'51	1'88	0'67	0'74	— 0'07	102'79
Eggs	gt.hun. 1'80	9'94	0'66	3'91	3'50	0'41	95'87
Butter	cwts. 1'97	4'94	0'91	1'90	2'61	— 0'71	114'37
Cheese	" —	40'29	—	17'15	16'56	0'59	98'54
2. <i>Vegetable Food</i> —							
Wheat flour	cwts. 57'63	34'19	11'24	4'05	7'30	— 3'25	109'51
Barley	" 14'16	5'55	— 0'92	— 0'64	— 0'38	— 0'26	104'69
Oats	" 12'77	4'55	1'20	0'34	0'43	— 0'09	101'98
Indian corn	" 41'63	12'59	17'07	3'89	6'05	— 2'16	117'16
Peas and beans.....	" 3'67	1'46	— 0'56	— 0'29	— 0'23	— 0'06	104'11
Rice	" 6'09	3'19	— 0'85	— 0'28	— 0'42	0'14	95'61
Potatoes	" 8'75	2'40	2'72	0'75	0'74	0'01	99'58
Currants and raisins	" 1'53	2'09	— 0'23	— 0'67	— 0'36	— 0'31	114'83
Oranges and lemons	bush. 3'43	1'42	1'04	0'27	0'51	— 0'24	116'90
Hops	cwts. 0'17	0'63	0'03	— 0'05	0'15	— 0'20	131'75
Pepper	lbs. 24'39	0'38	— 3'03	— 0'37	— 0'08	— 0'29	176'32
Sugar.....	cwts. 18'21	20'83	2'54	— 0'56	3'47	— 4'03	119'35
Total vegetables	—	89'28	—	6'44	17'18	— 10'74	112'03
3. <i>Beverages</i> —							
Brandy	gals. 3'57	1'43	0'05	0'10	0'02	0'08	94'48
Rum	" 6'63	0'60	0'05	— 0'08	0'05	— 0'13	121'67
Other spirits.....	" 1'98	0'18	0'42	— 0'01	0'07	— 0'08	144'44
Wine	" 16'46	6'00	— 3'26	— 1'72	— 1'28	— 0'44	107'33
Alcoholics	—	8'21	—	— 1'71	— 1'14	— 0'57	106'94
Cocoa.....	lbs. 18'01	0'69	2'83	0'22	0'09	0'13	81'16
Coffee	" 142'62	6'01	— 24'45	0'72	— 1'42	2'14	64'39
Tea	" 205'46	13'10	20'42	0'12	1'43	— 1'31	110'00
Other.....	—	19'80	—	1'06	0'10	0'96	95'15
Total beverages	—	28'01	—	— 0'65	— 1'04	0'39	98'61

D.—Table of the Principal Articles Imported, &c.—Contd.

[In millions to two places of decimals.]

Articles.	Quantity.	Values.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.
			Quantity.	Value.	To Quantity	To Price.	
4. Miscellaneous—		£			£	£	£
Oil, olive and palm cwts.	1'08	2'17	— 0'13	— 0'80	— 0'31	— 0'49	122'58
„ seed cake tons	0'20	1'63	0'07	0'38	0'67	— 0'29	117'79
Guano and bones.... „	0'27	2'35	0'05	0'53	0'45	0'08	96'17
Nitre cwts.	2'08	1'54	0'49	0'32	0'35	— 0'03	101'95
Tallow „	0'92	1'81	— 0'41	— 1'03	— 0'85	— 0'18	109'94
Petroleum..... tuns	0'12	1'21	0'10	0'78	2'15	— 1'37	213'22
Tobacco..... lbs.	91'38	3'72	— 43'92	0'92	2'80	— 1'88	150'54
Bark, Peruvian cwts.	0'06	0'66	0'03	0'38	0'19	0'19	71'21
Total miscellaneous	—	15'09	—	1'48	5'45	— 3'97	126'31
Total for food and } consumption..... }	—	172'67	—	24'42	38'15	— 13'73	107'91
I. MATERIAL FOR MANUFACTURE OR MANUFACTURED.							
1. Textile—							
Cotton cwts.	11'98	33'52	— 0'66	— 20'10	— 2'80	— 17'30	151'61
Flax „	1'55	3'48	— 0'47	— 1'52	— 1'16	— 0'36	110'34
Hemp „	1'22	1'92	0'12	— 0'18	0'23	— 0'41	121'35
Jute „	4'25	3'24	0'20	— 0'91	0'21	— 1'12	134'57
Silk lbs.	4'17	3'68	— 2'99	— 3'99	— 3'21	— 0'78	121'20
Wool,—sheep, } goats, and rags }	478'90	24'59	98'10	4'73	6'36	— 1'63	106'63
Total textile	—	70'43	—	— 21'97	— 0'37	— 21'60	130'67
2. Metals—							
Copper and ore..... tons	0'17	4'62	0'05	— 1'67	1'79	— 3'46	174'89
Iron and ore..... „	1'96	5'22	1'40	1'78	5'30	— 3'52	167'43
Lead „	0'10	1'82	0'03	0'30	0'66	— 0'36	119'78
Tin „	0'33	1'04	0'16	— 0'09	1'06	— 1'15	211'58
Zinc „	0'03	0'61	0'02	0'31	0'15	0'16	73'77
Total metals	—	13'31	—	0'63	8'96	— 8'33	162'58
3. Manufactured Articles—							
Glass..... cwts.	1'22	2'05	0'53	0'83	1'22	— 0'39	119'02
Gloves doz. prs.	1'06	1'30	—	— 0'10	0'02	— 0'12	109'23
Woollen yarn lbs.	11'33	1'35	0'37	— 0'03	— 0'04	0'01	99'25
Cloths and stuffs pieces	0'49	2'00	— 0'20	— 0'32	— 0'67	0'35	82'50
Total manufactured } articles	—	6'70	—	0'38	0'53	— 0'15	102'24

D.—Table of the Principal Articles Imported, &c.—Contd.

[In millions to two places of decimals.]

Articles.	Quantity.	Values.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.
			Quantity.	Value.	To Quantity.	To Price.	
<i>4. Miscellaneous—</i>		£		£	£	£	
Caoutchouc	cwts. 0'15	1'31	— 0'01	— 0'45	— 0'11	— 0'34	125'95
Esparto grass, &c. ..	„ 0'14	0'94	— 0'04	0'14	0'32	— 0'18	119'15
Hides, raw	„ 1'16	3'40	— 0'28	— 1'54	— 0'98	— 0'56	116'47
„ tanned	lbs. 50'43	2'86	22'87	1'07	1'48	— 0'41	114'34
Indigo	cwts. 0'07	1'58	— 0'03	— 0'90	— 0'74	— 0'16	110'12
Seed, cotton, and clover.....	„ 3'76	2'21	0'13	0'05	0'08	— 0'03	101'36
Seed, linseed and rape.....	qrs. 2'63	6'48	0'87	1'36	2'53	— 1'17	118'06
Wood, hewn.....	loads 1'68	4'11	— 0'10	— 1'06	— 0'29	— 0'77	118'73
„ sawn.....	„ 3'62	9'01	0'53	1'44	1'29	0'15	98'34
Total miscellaneous.....	—	31'90	—	0'11	3'58	— 3'47	110'87
Total material	—	122'34	—	— 20'85	12'70	— 33'55	127'42
Total of specified articles*.....	—	295'01	—	3'57	50'85	— 47'28	116'03

* It will be understood that the minus sign betokens a deficiency, its absence an increase, and that the figures will read thus, total 295'010,000*l.*, 3'570,000*l.*, 50'850,000*l.*, — 47'280,000*l.*

E.—Table of the Principal Articles Exported from the United Kingdom in 1878—Quantity, Value—and Excess, or Deficiency of same compared with 1872.

[In millions to two places of decimals.]

Articles.	Quantity.	Value.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.
			Quantity.	Value.	To Quantity.	To Price.	
<i>I. BRITISH PRODUCE.</i>		£		£	£	£	
<i>1. Textile Manufactures—</i>							
Cotton yarn and thread.....	lbs. 262'72	14'92	42'73	— 3'19	3'76	— 6'95	146'58
Cotton piece goods.....	yds. 3,618'13	48'09	82'97	— 10'79	1'38	— 12'17	125'31
Jute yarn	lbs. 12'24	0'18	— 0'47	— 0'08	— 0'01	— 0'07	138'89
„ piece goods	yds. 122'97	1'59	38'90	0'12	0'68	— 0'56	135'22
„ bags	doz. 5'21	1'56	1'54	— 0'07	0'68	— 0'75	148'08
Linen yarn	lbs. 18'48	1'21	— 12'74	— 0'93	— 0'87	— 0'06	104'96
„ piece goods....	yds. 157'23	4'72	— 84'36	— 2'75	— 2'61	— 0'14	102'97
Silk piece goods	„ 3'39	0'62	1'31	0'21	0'25	— 0'04	106'45
Woollen yarn	„ 31'18	3'91	— 8'56	— 2'20	— 1'32	— 0'88	122'51
„ piece goods ..	„ 251'37	14'77	— 149'49	— 14'25	— 8'75	— 5'50	137'24
„ carpets	„ 6'63	0'84	— 5'17	— 1'07	— 0'83	— 0'24	128'57
Wool, sheep	lbs. 6'44	0'55	— 1'22	— 0'08	— 0'10	0'02	96'36
Hats	doz. 0'90	1'08	0'32	0'23	0'47	— 0'24	122'22
Leather	cwts. 0'16	1'18	0'02	— 0'04	0'17	— 0'21	117'80
Boots and shoes	doz. 0'43	1'31	— 0'15	— 0'39	— 0'44	0'05	61'83
Paper, books, and material for making paper.....	„ 0'99	2'12	0'01	— 0'22	0'15	— 0'37	117'45
Total textile.....	—	98'65	—	— 35'50	— 7'39	— 28'11	128'49

E.—Table of the Principal Articles Exported, &c.—Contd.

[In millions to two places of decimals.]

Articles.	Quantity.	Value.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.	
			Quantity.	Value.	To Quantity.	To Price.		
		£		£	£	£		
2. Metal and Minerals—								
Coals	tons	15'48	7'32	2'27	— 3'12	1'79	— 4'91	167'08
Copper	cwts.	0'90	3'11	0'21	— 0'14	0'98	— 1'12	136'01
Iron	tons	2'29	18'40	— 1'10	— 17'66	— 9'00	— 8'66	147'07
Lead	cwts.	0'69	0'65	— 0'19	— 0'25	— 0'19	— 0'06	109'23
Tin.....	"	0'12	0'41	0'01	— 0'45	0'08	— 0'53	229'27
Total metal	—	29'89	—	— 21'62	— 6'34	— 15'28	—	151'12
3. Miscellaneous—								
Alkali	cwts.	5'65	1'97	1'19	— 0'52	0'66	— 1'18	159'90
Glass	"	0'75	0'65	— 0'25	— 0'23	— 0'23	—	—
Beer	brls.	0'41	1'76	— 0'11	— 0'32	— 0'44	0'12	93'17
Fish, herrings	cwts.	0'67	0'93	0'04	0'04	0'06	— 0'02	102'15
Oil, seed oil	gals.	16'96	1'94	5'85	0'40	0'81	— 0'41	121'13
Salt	tons	0'82	0'50	0'07	— 0'03	0'05	— 0'08	116'00
Soap and candles ...	cwts.	0'38	0'57	0'09	0'05	0'10	— 0'05	108'77
Spirits	gals.	1'42	0'39	— 0'38	0'17	— 0'04	0'21	46'15
Sugar, refined	cwts.	1'04	1'21	0'41	0'20	0'66	— 0'46	138'02
Total miscellaneous ...	—	9'92	—	— 0'24	1'63	— 1'87	—	118'85
Total British produce	—	138'46	—	— 57'36	— 12'10	— 45'26	—	132'69
II. FOREIGN AND COLONIAL GOODS.								
1. Articles for Food and Consumption—								
Wheat and wheat } flour	cwts.	0'91	0'53	0'69	0'39	0'44	— 0'05	109'43
Rice	"	3'84	2'43	0'70	0'45	0'44	0'01	—
Pepper	"	18'28	0'29	0'39	— 0'20	0'01	— 0'21	172'41
Sugar	"	0'43	0'53	0'19	0'18	0'27	— 0'09	116'98
Spirits	gals.	2'77	0'46	— 0'83	— 0'15	— 0'17	0'02	95'65
Wine	"	1'37	0'63	— 0'67	— 0'32	— 0'31	— 0'01	101'59
Cocoa.....	lbs.	9'74	0'33	3'83	0'18	0'10	0'08	75'26
Coffee	"	113'91	4'71	— 44'76	0'10	— 1'19	1'29	72'61
Tea.....	"	39'55	2'56	0'16	— 0'69	— 0'01	— 0'68	126'56
Oil, cocoanut, } olive, and palm }	cwts.	0'32	0'63	— 0'45	— 0'83	— 0'81	— 0'02	103'17
Tobacco.....	lbs.	15'41	0'59	— 1'75	— 0'22	— 0'08	— 0'14	123'73
Bark, Peruvian.....	"	0'04	0'65	0'02	0'43	0'22	0'21	67'69
Total food and con- } sumption	—	14'34	—	— 0'68	— 1'09	0'41	—	97'14

E.—Table of the Principal Articles Exported, &c.—Contd.

[In millions to two places of decimals.]

Articles.	Quantity.	Value.	More or Less than 1872.		Value of Increase or Decrease due		Percentage of 1872 Prices on 1878.
			Quantity.	Value.	To Quantity.	To Price.	
2. <i>Miscellaneous—</i>		£		£	£	£	
Cotton, raw cwts.	1'31	3'47	— 1'13	— 5'35	— 4'08	— 1'27	136'60
Jute „	1'01	0'79	0'25	0'07	0'24	— 0'17	121'52
Silk, raw lbs.	1'84	1'46	— 1'36	— 2'49	— 1'67	— 0'82	156'16
Wool, sheep „	199'27	12'23	61'76	2'96	4'16	— 1'20	109'81
Copper cwts.	0'25	0'86	0'06	— 0'33	0'30	— 0'63	173'26
Iron and steel tons	0'06	0'56	0'04	0'30	0'50	— 0'20	135'71
Caoutchouc cwts.	0'09	0'74	0'03	0'07	0'34	— 0'27	136'49
Hides, raw „	0'41	1'26	— 0'04	— 0'38	— 0'15	— 0'23	118'25
Guano tons	0'02	0'31	0'01	0'25	0'01	0'24	22'58
Indigo cwts.	0'05	1'24	— 0'02	— 0'50	— 0'54	0'04	96'77
Seed, rape qrs.	0'18	0'50	0'13	0'35	0'39	— 0'04	108'00
Total miscellaneous	—	23'42	—	— 5'05	— 0'50	— 4'55	119'43
Total foreign and colonial }	—	37'76	—	— 5'73	— 0'54	— 4'14	110'96
Total specified articles*	—	176'22	—	— 63'09	— 13'69	— 49'40	128'03

* It will be understood that the minus sign betokens a deficiency, its absence an increase, and that the figures may read thus, total, 176'220,000*l.*, — 63'090 000*l.*, — 13'690,000*l.*, — 49'400,000*l.*

DISCUSSION *on* MR. BOURNE'S PAPER.

MR. GIFFEN said he was glad to have the opportunity to be the first to congratulate Mr. Bourne on the very able paper he had read. Mr. Bourne had investigated the subject with very great care and diligence, and the figures and facts he had brought forward threw a great deal of light on the subject. There were some points which he wished to have cleared up a little more. First of all what was Mr. Bourne's real meaning by the sentence in the early part of his paper, in which he said that "the only real fixture in value is the pound sterling, which, though in itself an imaginary standard, becomes a very real one when practically applied." It seemed to him that this was flying in the face of a very famous speech of Sir Robert Peel upon the Bank Charter Act, in which he began by asking the question, "What is a pound sterling?" and replied by saying, "It is simply a certain quantity of gold." That was by no means an imaginary standard, but a very real and definite article indeed, and he should like to ask whether Mr. Bourne meant to depart from that expression of opinion by Sir Robert Peel. If Mr. Bourne thought that that was not a good definition, he (Mr. Giffen) would again have the unhappiness of disagreeing with him. The next question he should like to ask Mr. Bourne was with reference to his frequent expressions as to the increased value of gold and the diminished value of commodities having different meanings, whereas they were only forms of the same expression. What was the real difference which Mr. Bourne meant to establish? The next question was with reference to the figures in the first table as to the production of gold. Sir Hector Hay's figures had been taken down to 1875; but after that Mr. Bourne said the figures were his own. There was a diminution in the production of gold for several years prior to 1875, and according to Mr. Bourne's figures there had been rather an increase since that date. The figure for 1875 was $19\frac{1}{2}$ millions; for 1872 it was 22,300,000, and for 1878 it was 22,800,000. He hardly thought from anything he had seen that there had been any increase in the production of gold in these three years. In Australia, which was one of the chief places of production, there had, he believed, been a continued diminution, if anything. In Russia the increase had been very small indeed, the total amount being between 4,000,000*l.* and 5,000,000*l.* sterling. Lately in the United States there had been no increase in the production of gold. The production of gold and silver rather diminished compared with what it was in 1876. He should like, therefore, if Mr. Bourne would explain what the figures were in detail for the production of gold, and in what countries the increase of production had taken place. The fact of reduction, moreover, seemed hardly consistent with the statement on which

Mr. Bourne based many of his remarks, that there had been a continued decline in the production. These were all minor questions. Coming to more important matters, the first conclusion of all to which Mr. Bourne had come, was one to which a little exception might be taken. He said that there never was a time in which the proportion of gold transactions was greater, and that the diminished production of gold had nothing to do with the fall of prices. Now it seemed to him (Mr. Giffen) that to take the fact that at the present moment there was an apparent plethora of gold did not at all disprove the statement that the present fall of prices had been brought about by a previous scarcity. The effect of a fall in prices was to make a smaller stock of gold do the work which formerly required a larger stock; and consequently this larger stock seemed to be abundant because prices had fallen. He thought that Mr. Bourne had hardly allowed for those circumstances in stating so broadly that there never was a time in which gold was so abundant in proportion to transactions, and therefore it could not have to do with the recent fall of prices. In support of this proposition, Mr. Bourne had given in a table at the beginning of Section III of his paper the figures of the foreign trade, to show that the proportion of gold to the quantity of merchandise moved was greater than ever it was; but he (Mr. Giffen) should remark upon this that no matter what the quantity of merchandise was, the value of it was adjusted to the gold, whatever the value of gold was at the time, so that the table did not prove so much as it seemed at first sight to do. Mr. Bourne also assumed that gold was used exactly to the same extent by the same countries at the beginning of the table as it was at the end of it, but that was not so. If gold was used by a much larger area of people now than it was at the beginning of the period, the table would be out a good deal, because a greater amount of work was thrown upon gold now than there was then. He might add generally that merely to take into account the foreign trade in a matter of this kind was insufficient. The home trade ought also to be taken into account; and although it was more difficult to get satisfactory figures of the home trade, he believed, as far as there was any detail on the subject, that the home trade increased in a much greater proportion than the foreign trade. The great increase of transactions shown by the railway traffic and by many other figures proved that the home trade had increased more rapidly than the foreign trade. There was no doubt also that the introduction of many economising expedients was carried to great perfection many years ago, and he doubted whether the requirements for gold, owing to the changed habits of the people, could have very much diminished since that time. For a long period gold in circulation had been merely a species of small change, and the other great use of gold as money had been in the shape of reserves in the banks, and he did not think that any great change had been made by which a less quantity of gold in proportion to population and wealth was required for these purposes than was required twenty or thirty years ago. This was a point to which Mr. Bourne should have addressed himself more specifically. In reference to the

latter part of the paper he would express his general agreement with it. He entirely agreed with what Mr. Bourne said of bi-metallism, and denied altogether that the fall of silver had made trade, and particularly the Eastern trade, bad. The real cause of the depression was not the state of the exchanges; but the state of the exchanges was very much the result of the depression itself. The unsoundness was owing to the operations of such firms as Alexander Collie and Co., and Heugh, Balfour, and Co., and to the kind of finance in which many of the banks had been engaged. This seemed to him to be a sufficient cause for the badness of trade, without any such recondite explanation as the fall of silver being required. Mr. Bourne's remarks on this head and on bi-metallism as the remedy were really unanswerable, and he had done a great service by bringing them forward.

Professor JEVONS thought that Mr. Bourne's paper, if not perfectly conclusive, was exceedingly plausible. If he understood aright the author's conclusion, it was to the effect that the fall of prices was not due to the scarcity of gold. Mr. Giffen, however, in a recent paper, had shown that the fall was very considerable, and it was probably to be accounted for by a cessation in the issue of paper currency. He should like to know to what Mr. Bourne attributed the fall of prices if it was not due to some important exceptional cause. He thought Mr. Bourne had entirely overlooked the important question of the flowing of gold out of a country when the paper currency was spread about the country, and the absorption of it when there was a resumption of specie payments. He apprehended that the fall in prices had been more than could be attributed to the ordinary periodic variation of currency. There were several questions in the paper which might be criticised in detail, but the most important question of the whole was, "Are we to have a bi-metallic money or a mono-metallic money?" At Manchester there had lately been a great discussion, and the newspapers there seemed to consider it quite a burning question; but for his own part he wished that this hubbub about bi-metallism could be put at rest. It was quite absurd to suppose that by any arbitrary arrangement the value of silver could be maintained at a fixed point. No doubt by the monetary law of France, established in the time of the Revolution, they succeeded in keeping the ratio of $15\frac{1}{2}$ to 1; but he believed that it was thus kept up beyond the natural tendency of things. The sudden fall that had since taken place was to a certain extent the reassertion of the natural tendency. Looking back over thousands of years, it would be found that there had been a continual tendency downwards in the value of silver relative to gold. In the time of the Greeks and Romans the ratio of exchange was something like that of 10 to 1, or even less; in the middle ages it rose to 12 to 1; in the last century it reached 15 or 16; and within the last year or two it had been as high as 22 to 1. The value of silver, of course, falls as the ratio of the weight given rises. Now such a long continued historical course of events could not be considered reversible. There was a natural tendency in this direction which

could not be long interfered with by a currency law. It was absurd to think that people should carry about silver in their pockets in order to keep up its value. This would be about as wise as to insist that pots and pans must be made of pure tin in order to keep the tin mines of Cornwall going. He hoped that very little more would be heard of the silver question. It was really a matter that could not be looked at from a personal point of view, but a matter for the whole world to consider, and he thought that the late resolutions of the conference at Paris, which was summoned by the influence of the silver party, and of which they had said very little since, ought to be considered as settling the matter. The conference laid down that gold and silver should both be used as money by the nations which at present used them, but they did not recommend bi-metallic money; and this was decided in France, where the bi-metallic system had been tried more fully than anywhere else. The French had during the last few years suspended the bi-metallic system, and, as far as he knew, they would allow it to become obsolete; and therefore he thought it was in the highest degree unreasonable to suppose that we, in this country, who had had a gold standard almost since the beginning of last century, should resort to a system which the French had so lately thrown over.

The other point to which he would refer was the Indian currency. And here he must say again, "*laissez faire et passer*" was the only policy. He could conceive nothing that would more surely meet defeat than an attempt to transform the Indian currency. It was the largest currency in the world in bulk, and was in the hands of a very numerous and most conservative people, and there was nothing more difficult or financially hazardous than to try and alter the currency of a vast population from one metal to another. The English Government might perhaps conquer Afghanistan, or exterminate the Zulus, but he felt quite certain that they would not succeed in overcoming the rupee.

Mr. LANGLEY called attention to the fact that a movement had taken place in Liverpool similar to that which had occurred in Manchester, the result being that a committee had been appointed by the Chamber of Commerce. It consisted of eighteen members, and the result of several days' discussion was that the whole of the members unanimously voted in favour of a resolution to appeal to the Government for a committee of inquiry into the question. So far from the question of bi-metallism *versus* a single gold standard being settled, in his judgment the discussion of it was only now commencing.

Professor LEVI said he was pleased to find that the paper did not give any countenance whatever to the fallacy of a double standard. His impression was that the question had been immensely exaggerated as affecting trade, and it was well that the Society should give forth no uncertain sound on the subject. As a question of science and of practical experience, he thought most people were agreed on the question of the single standard as the sole mode of minimising

the inconvenience of comparing the value of numerous commodities with some one as a standard and that least liable to change. There had been numerous congresses on the question of the standard. There was one in 1867, and he had recently attended one in 1878, during the last Exhibition in Paris, and on both occasions there were some earnest advocates of the bi-metallic system. In almost every case, however, the ultimate resolution arrived at had been one in favour of a single standard. In truth, practical experience told against it. It had been said, let us have a tariff of $15\frac{1}{2}$ to 1, but the relation between any two metals could not be fixed. Notwithstanding all the efforts of the bi-metallists in America and the passing of a law professedly to introduce the bi-metallic system, the treasury of America had not been able to carry it out. The quantity of silver put in circulation was, after all, insignificant. They could not change a system which experience taught was the best, notwithstanding what might be said to the contrary. He was glad that the question had been brought before the Society. No doubt it would be again and again discussed, but it behoved the Society to send forth an absolute and decided opinion in favour of a single standard.

Mr. L. L. COHEN said that there was one point on which they would all agree, that if a new state of things were being dealt with in any country no one would introduce the bi-metallic system. Two metals introduced into a country intermingling with every branch of business would not be the basis of a system which would be adopted for the first time. But that was hardly the question. Such a state of things was found to be existing in many countries of the world, and they ought to deal, not with what would be the most perfect system in the world, but what, considering the state of things that already existed, was the most feasible and the one that could be carried on with the least change in the people's habits and occupations. They ought to come to the conclusion, from the paper that had been read, that it was better and wiser and safer to leave the question in the position in which it stood at the present time than to legislate on the subject. If they began to introduce changes into India, which now absorbed the largest quantity of silver in the world, an element of confusion would be brought about in the country which would be very undesirable. The time would come when from the natural rebound of trade or the relative diminution of the supply of silver as compared with other metals, some change could perhaps be introduced with much greater facility than at the present time. There was one important point in connection with this subject as to which he would take exception to the figures Mr. Bourne had placed before them. The figures were not his (Mr. Cohen's), but they were those of statisticians whose names were well known. At the bottom of p. 408 Mr. Bourne had said, "The same authorities would set down the consumption in the arts and manufactures and wear and tear of coin at about 2,000,000*l.* per annum of each metal." He had read from the work of Mr. McCulloch, who was no mean authority on the subject, that the consumption of precious metals was no less than 29,500,000*l.*

a-year, subdivided into three heads, one being the wear and tear and loss of coinage, which he put at 7,500,000*l.*, 10,000,000*l.* for the new coinage required for the different parts of the world, and 12,000,000*l.* for the annual use of luxuries and different articles of commerce, for which gold and silver were absolutely required. The difference was so large between 29,500,000*l.* and 2,000,000*l.* that it would have a very important bearing on the result if it were worked out. There was one point raised by Mr. Giffen which did not amount to very much, namely, the question of what the meaning of a pound sterling was. A great deal was made of that. It had been said that a pound was a fixed standard; but there was no such thing as an absolutely fixed quantity in commerce: it meant that which a pound would purchase, and if fixity were spoken of it would be in relation to other quantities which were moveable; therefore the authorities quoted agreed that a pound was a fixed quantity, and yet it was in some respects a variable quantity, because the purchasing power being variable, it would be seen that it rose or fell in relative value according to the prices of the different commodities in ordinary use. He thought that the paper would do a great deal, from the publicity which it would obtain, to clear up the differences which existed with reference to this question. There was nothing so difficult in commerce as when an unknown quantity had to be dealt with. In this country we knew much of the movements of trade, and were able to bring scientific knowledge to bear on the subject, owing to the efforts of men like Mr. Giffen and Mr. Bourne, who showed from day to day what was moving in every article of commerce, and what was being done with them in import and export. Unfortunately, in Germany a quantity was being dealt with which was unknown, and some of the best men had failed to elicit from the German Government any statement as to the amount of silver that had been withdrawn from circulation, as to the quantity that had been disposed of, and as to the locality where a balance was stored. If business men knew the absolute quantity which remained to be dealt with, he thought the effect upon the minds of the people who absorbed silver in different parts of the world would be to a great extent diminished. Some men assumed the quantity to be 17,000,000*l.*; others 25,000,000*l.*; others as low as 10,000,000*l.* He thought that no greater service could be done to the country than to arrive at what the amount really was, and whether the silver was floating about in a redundant circulation, which the German Government would have to gather up year by year, and which could not at any one given time be gathered together to neutralise any efforts the Government of this country might make to stave off the distress said to be caused in India in consequence of the depreciation of the silver coin. Opposition to any Government measure would be now based on the fact that it would lead by enhancing the price of silver to stimulate that which it was desirable to avoid, viz., an undue glut from Germany; therefore he thought it would be a most important factor to know the exact value of the quantity that was left for sale. He agreed entirely with Mr. Bourne, that legislation in the matter was most unde-

sirable, and that it should be left to the ordinary laws of commerce, which would prove, as they had proved before, sufficient to rectify the present depreciation and inconvenience.

Mr. COLES said he was unable to gather from the figures what quantity of silver was imported into India, unless he was informed at what price it was taken at from time to time. For instance, in 1874-75, it stood at 100,000,000*l.*; but what it was valued at at that time the table did not state; therefore, in the absence of quantities, he felt puzzled. He suggested to Mr. Bourne whether it would not be possible to deal with quantities side by side with the amounts, so that it might be in some measure determined how the silver was estimated in the corresponding column in gold.

The PRESIDENT in moving a vote of thanks to Mr. Bourne for his very interesting paper, said that he agreed so much in substance with the general conclusion of the paper, that he felt some hesitation in pointing out some details with which he disagreed. In the first place he thought Mr. Bourne would hardly have been himself if he had not introduced the old question of the balance of trade. He was unable to agree with Mr. Bourne that the depreciation of silver was in any way due to the excess in late years of our imports over our exports. He was also unable to agree that the depreciation of silver was due to the depression of trade. He should have thought that if the depression of trade had had any effect on the value of metal as a circulating medium, it would have had the effect rather on gold than on silver. Gold was the circulating medium of this country, and of the western countries of Europe, as also of America, and therefore the depression of trade would have an effect on gold rather than on silver. Again, he was unable to concur with Mr. Bourne as to the value of his Table No. V, in which he gave the average price of Government stocks and the rates of interest in England, France, and Germany. It appeared to him (the President) that a national debt—these Government stocks—were a promise to pay debts in gold, and the interest was payable in gold, and how their price could be affected by the varying price of gold he was unable to see. So again he was inclined to undervalue the table in Section III, and he agreed with the observations that Mr. Giffen had made upon it. He did not think that moving merchandise could be taken as altogether a test of the trade of the world. Taking the case of the United States, for instance, he presumed that the internal trade of the United States had increased indefinitely greater than its external trade, and therefore its requirements for a circulating medium might be increased out of proportion to its external trade; and the same would apply to other countries in Europe. He might, however, be permitted to say that on the general and very moderate, and it seemed to him, wise conclusions drawn from the paper he was able to give his concurrence. The early part of the paper seemed to be intended to controvert the propositions that had been put forward by Mr. Giffen in a paper

read some few weeks previously on the prices of various commodities, and in which the author endeavoured to show that the value of gold had been appreciated of late years. When that paper was read he (the President) did not think the case had been altogether made out, although some interesting facts were presented to the Society; but after such careful consideration as he had been able to give to it since, and also from the additional facts that had been brought forward by Mr. Bourne, he thought that although there might be a slight tendency to the appreciation of gold, it was by no means clear that the fall in prices of the last few years had been due wholly or even in a great measure to that fact. But though it might be doubted whether the value of gold had been appreciated, still it could not be doubted that there had been considerable depreciation in the value of silver, whether measured in the value of gold or in the value of other commodities. What the real cause of that depreciation might be, was of course a question involved in difficulty. It was, however, worthy of observation by those who looked at the tables, that the depreciation of silver began almost at the same time as the increase of the production of silver took place. This was brought out very clearly in Table VI of Mr. Bourne's paper. It would be seen from that table that the price of silver relatively to gold remained very stationary from 1850 to 1871, and that during the whole of that time the production of silver was almost year by year the same. It varied very slightly from 8,000,000*l.* to 10,000,000*l.* per annum, and the price relative to gold varied from 59 to 60 pence per oz. It was only in 1872 and 1873 that the price of silver began to fall, and it was in 1872 that the production of silver began to take place in considerably increased amount. Therefore, there was the coincidence of these two facts, the reduced price of silver and the increased production of silver; and when to the increased production of silver were added the other facts which had been brought forward by Mr. Bourne, and reported on by the committee of the House of Commons, namely, the demonetisation of silver by Germany, and the substitution of gold for silver in the Scandinavian countries, there were abundant causes at work to account for the present depreciation of silver. Whether that depreciation would continue was a totally different question. Looking at the figures brought out in Table VI, and at the fact that for so many years the production of silver remained stationary at 8,000,000*l.* per annum, and that during that period the price of silver did not vary relatively to gold, he could not believe that the fact that for some five or six years in succession the production of silver had doubled, would alone be sufficient to cause a permanent depreciation of anything like the present amount in the value of silver. The demonetisation of silver in Germany was a temporary cause, and when that cause was removed, its effect would also be removed. So with the other causes. The over production of silver was no doubt a more permanent cause; but he could not believe that double the amount of production would be sufficient to account for a depreciation in silver of 17 per cent. The production of silver, however, might not continue at the same rate. Indeed, there was reason to believe

that the production of silver was already falling off, and putting all things together, he had not as yet any reason to believe that the depreciation of silver as compared with gold, would permanently be so large as at present, namely, 17 per cent. It was questionable, therefore, whether any of the proposals for raising the price of silver relatively to gold, and especially that known as bi-metallism, should be entertained. Notwithstanding what had been said by Mr. Langley, he thought that the question of bi-metallism was impossible in this country. He thought that anybody who ventured to propose it here would be almost worthy of a place in a lunatic asylum. He believed that the conclusions of the congress of Paris had practically been accepted by most statesmen and philosophers in this country; and that any attempt to introduce a double standard in this country would wholly fail. Speaking of India, though he entirely disagreed with the proposition that bi-metallism in any form should be introduced into that country, it was impossible not to see that in Manchester, and in other parts of the country, there was a considerable desire on the part of merchants connected with Eastern trade to do something to mitigate the present evil of the depreciation of silver in connection with that trade. He could not but think it was an extremely difficult subject, and he should like to see any definite plan proposed for curing the existing evils. Such plans as had been proposed seemed to him to be only bi-metallism under another name. Mr. Langley had asked, "How are we to settle the balance of trade of the country?" He presumed that he meant India, and he thought that the balance of trade would be settled in the future as it had been in the past, by India exporting more than she imported, and by paying with her produce for debts due by her. It must be admitted that at the present moment there was a considerable difficulty felt by the Government of India in effecting remittances to this country arising from the depreciation of silver; and he was not without fear that some proposal involving bi-metallism in some subtle form or other might be proposed by those engaged in the Government of India with the view of curing that defect. For his own part he was confident that any attempt to do this directly or indirectly would fail, and in all probability would entail greater evils than those sought to be cured. It was impossible to interfere with the currency of a country like India without the greatest difficulty and danger. He was by no means persuaded that a depreciation of silver was so great a misfortune for India as had been alleged. This was a point which ought to be determined before anything was done. It might be extremely inconvenient for the Government of India that there should be a depreciation of silver when it had to pay to this country in gold which had to be raised in the shape of silver in the form of taxation in India. He was by no means persuaded, however, that it might not be better for the Indian people to incur a temporary loss of 2,000,000*l.* a-year in payment to this country on account of depreciated silver, rather than to incur what he believed would be the far greater evil of altering their currency. With Mr. Bourne's conclusion then he generally concurred, and had much pleasure in moving

that the thanks of the Society be awarded to him for his able paper.

MR. J. C. MURRAY said he should like to correct a misapprehension. He had lived for some time in India, and knew the Indian currency. The original currency of India was gold, and so late as 1866 and two years before there were two commissions appointed by the Indian Government to look into this question of the adoption of the gold standard. The conclusion they came to, after taking evidence from all classes of society, all over the country, was that gold should be introduced, that the old currency should be restored ; and that the proper currency for India was gold, notes, and silver. He was President of the Chamber of Commerce when the depreciation first took place, and he strongly advocated the introduction of gold. He was told that there was not enough for the world including India ; but he thought Mr. Bourne had proved that there was quite enough gold for everybody. In India the gold would not be wanted for internal currency : the silver would be sufficient for that. They would only require the gold to pay the balances of trade due to England and other gold using countries if necessary, and he thought the thing could be done without such great disarrangement of currency or disorganisation of trade as some appeared to apprehend.

MR. BOURNE in reply, said that Mr. Giffen had taken exception to his definition of the value of a pound. He admitted that there were two senses in which the value of a pound might be taken. Sir Robert Peel's definition he agreed with, because the only tangible representation of a pound was so much gold ; but the pound also measured debts, obligations contracted, and property acquired, and therefore it had a greater fixture than the gold itself. What he wanted to prove was that property which was equally valuable at one period as at another, yet varied in price ; say 100*l.* stock in consols was really as valuable formerly as now, not for the purpose of immediate sales, but for the purpose of holding, because it produced a certain proportion annually in interest. He wished to show that gold fluctuated in value, and that silver much more fluctuated, and when there were two unstable elements, the effort to fix stability between them, was to attempt that which was utterly impossible. He quite agreed with the President's remark that the paper had in some measure taken its tone from Mr. Giffen's paper. Mr. Giffen seemed to show that gold having altered so much in value, silver had altered less than it had been generally considered to have done. It therefore became important to consider how far gold had changed in value. The figures in Table E in the appendix were important as showing that while the percentage of 1872 prices on those of 1878 had been 116 per cent. for our imports, it had been 133 for the British exports ; and therefore Mr. Giffen's argument, derived mostly from goods sent abroad, did not apply in the same ratio to those goods which were received at home. For a series of years the imports had been rising, and the exports had been falling in price ; and that seemed to him to prove that neither

the rise nor the fall had its origin in the alteration of the gold. He believed it arose from the circumstances of trade. Mr. Giffen had asked a question with regard to the quantities of gold produced in the last three years. The amounts in the table were not given on his own authority. He had left these years blank to the last moment in the hope that Sir Hector Hay, who compiled the preceding ones, would give him the succeeding years; but he had been unable to obtain them. The diversity of opinion as to the production and the quantity of gold in circulation was so great, that it was desirable to get all the figures from the same source.

Sir HECTOR HAY, interposing, said that his figures had come out very different from those that had been adduced by Mr. Bourne for the last three years.

Mr. GIFFEN said it would be desirable to show in detail the production from each country in any comparison with the figures produced by Sir Hector Hay.

Mr. BOURNE said he would introduce them in the publication in the *Journal*. He had arrived at the opinion that relatively to the business that had to be transacted, the settlements that had to be effected, and the various facilities there were for the economising of gold, there was now more gold than ever there was before. At the present moment there was an accumulation of gold because there was a lessening of transactions which required the use of gold. It was the amount that had to be paid, not the amount of goods it represented, which constituted the real use of gold. The principal question involved was that of a bi-metallic currency. But for this there would not be heard so much of the fall in silver, unless from those who happened to be the holders of it, and excepting for the peculiar circumstances which made it a matter of vital importance to India. There was no doubt that it was a very serious difficulty in the management of the finances of India, but he was not at all of opinion that anything like the introduction of a bi-metallic system there would meet the difficulty. What had to be dealt with in the present day was the eagerness each man exercised in flying to the remedy which seemed to him to meet his own peculiar circumstances. Mr. Cohen raised an objection in reference to the figures as to the wear and tear of gold, but he (Mr. Bourne) took from the report of the committee the only available figures concerning the depreciation of silver, and 2,000,000*l.* were the figures given. He admitted that they were somewhat small, but he took them in the absence of any other information. He thought Professor McCulloch's estimate of 29,000,000*l.* was very far beyond what might be accepted in the present day, but he might be wrong in this respect. As to the sale of silver by the German Government, he could not get better information. Those conversant with Indian accounts would know that in converting accounts rendered in rupees into sterling money, the uniform calculation was 10 rupees in the pound, and there was no doubt that the imports and exports as shown in the accounts for the several years would be affected by the value of

silver at those particular times. He begged to thank the President for his kind remarks. He hardly expected that he would agree with him as to the balance of trade affecting the depreciation of silver, but he was quite contented to let that part of the argument remain to be established as time passed on.

The thanks of the Society were accorded to Mr. Bourne by acclamation.

The FEASIBILITY of COMPULSORY EDUCATION in IRELAND.

By W. NEILSON HANCOCK, ESQ., LL.D., M.R.I.A.

[Read before the Statistical Society, 6th May, 1879.]

CONTENTS:

	PAGE		PAGE
I.—Legislation as to Compulsory Education in England and Scotland	456	IV.—What are the Modifications of English Acts of 1870-76 Necessary in Extending them in Ireland?	461
II.—Is it Feasible to Extend the English Compulsory Education System of 1870-76, and Scotch of 1872-78, to Ireland?	458	V.—Existing Facilities for the Adoption of the System of Compulsory Education in Ireland.	462
III.—Are there any Statistics to show whether Compulsory Education is as much required in Ireland now, as it was in England in 1870, or in Scotland in 1872? ..	459	VI.—General Results to be Expected from the Constitution of School Attendance Committees with a View to Compulsory Education	465
		VII.—Imperial Nature of the Question of Compulsory Education in Ireland	468
		VIII.—Summary of Conclusions...	471

INVITED to read a paper before this Society, I have selected a subject, the solution of which rests largely on the results of statistical research.

It is a branch of the Irish education question, which is one of the most urgent and important of Irish subjects that awaits a solution in the near future.

As the question is one of considerable difficulty, I would not have ventured to discuss it, were it not that from having been Secretary of two commissions of Irish education inquiry, the Dublin University Commission of 1851-53, and the Endowed Schools Ireland Commission of 1854-58, the Irish education question has been very much before my mind for the past quarter of a century.

I.—Legislation as to Compulsory Education in England and Scotland.

Without referring to the common legislation for England, Scotland and Ireland, for securing the education of children employed in factories, I will commence with noticing the system of general compulsory education introduced in England in 1870, and in Scotland in 1872.

In 1870, by Mr. Forster's Elementary Education Act, English school boards were enabled to make bye laws requiring parents of children between 5 and 13 years of age, to cause them to attend school.

In 1872, by the Scotch Education Act of that year, parliament made it obligatory on every parent in Scotland to provide elementary education for their children between 5 and 13.

It further imposed upon the local poor law authority the obligation of paying out of local rates the school fees, or portion of school fees, where parents were unable to pay them.

The Scotch Act further protected children under 13 years of age, by making every employer of such children as domestic servants, farm servants, or workers in mines, factories, or workshops, liable to the duty of a parent in respect of the child's instruction, unless the child had received three years' regular instruction after 5, and was able to read and write.

In 1873 an Act was passed to regulate the employment of children in agriculture in England. It secured one of the objects of the Scotch Act, but in a slightly different manner; it prohibited the employment in agriculture of children under 8 years of age, except on land in the occupation of the parent, guardian or person who is liable to maintain the child; above 8 years of age protection was secured by requiring 250 school attendances before employment if under 10 years of age, and 150 in the preceding year if of 10 years of age or upwards.

In 1876 the English legislation in the matter of compulsory education was carried the whole length of the Scotch legislation, and it was enacted by Lord Sandon's Elementary Education Act that:—

“It shall be the duty of the parent of every child, to cause
“such child to receive efficient elementary instruction in reading,
“writing, and arithmetic, and if the parent fail to perform such
“duty, he shall be liable to such orders and penalties as are
“provided by the Act.”

The Agricultural Children's Act of 1873 was repealed by Lord Sandon's Act, but more carefully framed provisions are substituted for it for protecting the employment of all children.

The enforcement of this statute is in the parts of England and Wales where there are school boards (with 13,000,000 population), entrusted to school boards, but for school districts not within the jurisdiction of school boards (with 9,700,000 population), there are provisions for the Act being enforced by a school attendance committee, which is to be appointed annually; if it is within a separate borough, by the council of the borough, and if it is a parish, by the guardians of the union comprising the parish. Urban sanitary

authorities may, if allowed by special order, have the appointment in their district.

The observance of the provisions of the Act by employers of children in factories, workshops and mines, is entrusted to factory inspectors, the school attendance committee, however, to assist them in the performance of their duty.

The Act of 1876 changes some provisions of what was called Denison's Act, as to education of children of parents receiving outdoor relief, into a general principle identical to that I have referred to as having been passed for Scotland in 1872, by which, in case of poor parents, the payment is provided for out of the poor rates of school fees not exceeding 3*d.* a-week, or so much as the parent is unable to pay, without such assistance having disqualifying effect of pauper relief.

The Act contains some development of the industrial school system, and some provisions for day industrial schools on the original plan of this form of charity as advocated by Sheriff Watson in Scotland, and by the late Miss Carpenter in England.

The Scotch Act of 1878 extends to Scotland the English provisions (with slight modification) for regulating the employment of children, and securing education before employment of those over 10.

From this great social code, developed by parliament in the past nine years, and applying to every child in England, and Scotland, every child in Ireland is entirely excluded.

II.—*Is it Feasible to Extend the English Compulsory Education System of 1870-76, and Scotch of 1872-78, to Ireland?*

Such being a short account of how this question has been dealt with in England and Scotland since 1870, the subject I have to submit to you this evening is, is it feasible now, in 1879, to extend this beneficial system to Ireland?

The first matter that this brief history suggests for consideration is, that this legislation was commenced by eminent liberal statesmen in 1870 and 1872, and has been cordially accepted and extended in 1876 and 1878 by the conservative statesmen who have succeeded them, thus the question is one not of party, but of social politics.

The next matter to observe is that Ireland is as to local government in exactly the same position as the districts of England and Wales that have not school boards. There are town councils, urban sanitary authorities, and boards of guardians on the English model; there are industrial schools and factory inspectors, and the system of factory inspectors is governed from London and not from Dublin.

Then the principle of paying school fees for poor parents out of

local rates was recommended for Ireland by the Royal Commissioners of Primary Education Inquiry in 1870, before it was adopted in England or Scotland.

The first conclusion which I would venture to submit to this Society is, that as compulsory education is a development of the protection of children, commenced by factory legislation, and extended by industrial school legislation, as factory legislation from its first commencement in 1833, and industrial school legislation since 1868, have been extended by parliament to Ireland, a *prima facie* case exists for extending compulsory education to Ireland unless some reason can be shown to the contrary, or some difficulty in the way pointed out.

In support of this proposition I would venture to quote a few sentences from the remarkable speech with which Sir Robert Peel closed his career as prime minister in 1846.

“He did not hesitate to say that in his opinion there ought to be established between England and Ireland complete equality in all civil, municipal, and political rights.” “So that no person viewing Ireland with perfectly disinterested eyes, should be enabled to say a different law is enacted for Ireland, and on account of some jealousy or suspicion Ireland has curtailed and mutilated rights.

“That was what he meant by equality. Let no one think he was making a reserve; he spoke of the spirit in which they ought to legislate.

“He thought it ought to be impossible to say that there is a different rule, substantially, with regard to the civil or municipal franchise in Ireland from that which prevails in England.”

Some twenty years before that speech, Sir Robert Peel had assimilated the Irish and English criminal law in 1828, and his work is completed at the end of half a century by the proposed common criminal code for England and Ireland of 1879.

Now if it be thought wise to have a common criminal code, is it not inconsistent with that principle to have it an offence for a parent to neglect the education of his child in England and no offence for a parent to neglect the education of his child in Ireland?

III.—*Are there any Statistics to show whether Compulsory Education is as much required in Ireland now, as it was in England in 1870, or in Scotland in 1872?*

In opposition to the proposal of complete assimilation in the matter of compulsory education, it may be said that so far back as the administration of Earl Grey, when the late Earl Derby (then Mr. E. J. Stanley) was Chief Secretary for Ireland, the State took

charge of Irish education some years before it undertook the care of education in England, and that it did so on certain principles which have been developed into a great system, and so there might possibly not have been the same necessity for compulsory education in Ireland as in England or Scotland.

We have on this matter a very simple and conclusive test to appeal to, namely, the educational statistics collected in the three parts of the United Kingdom at the census of 1871, which coincides very closely with the dates of the English legislation of 1870, and Scotch of 1872.

The age periods in the English and Scotch statistics, 5 to 15, agree, the Irish statistics differ, owing to that want of uniformity in statistics so much to be deplored, and are from 5 to 16 years of age.

I have, however, made the corrections in the Irish figures by deducting all the children in the population between 15 and 16, without deducting any from the children in attendance for those between the ages of 15 and 16.

The results are shown in the following tables, 1, 2, 3.

School Attendance, 1871.

	Number.	Per Cent.
TABLE 1. ENGLAND AND WALES.		
Children between 5 and 15	5,130,765	100
Scholars	3,123,785	61
At home or in employment.....	2,006,980	39
TABLE 2. SCOTLAND.		
Children between 5 and 15	776,871	100
Scholars	541,895	70
At home or in employment	234,976	30
TABLE 3. IRELAND.		
Children between 5 and 15	1,261,960	100
Attending school (week ended 17th June, 1871)	576,312	46
Not attending school.....	685,648	54

It appears from these tables that compulsory education was thought necessary in England when only 39 per cent. of the children between 5 and 15 were in non-attendance at school. In Scotland similar legislation was thought necessary though only 30 per cent. were in non-attendance.

The proportion not attending school in Ireland in 1871 was 54 per cent.

It may be said, however, that this is only based on figures so far

back as 1871, and there has been an increase in the daily average number attending school since 1871. This does not, however, bring the Irish proportion near the English or Scotch.

The Irish national schools show an increase of daily average number from 1870 to 1877 of only 16 per cent. In England and Wales the State aided schools show in the same time an increase in the daily average of 80 per cent. In Scotland the increase from 1872 was 70 per cent.

There are, besides, other recent figures by which to test the matter; of 597 children committed to industrial schools in Ireland in 1877 (the latest published figures), of 8 years of age and upwards, no less than 309, or 52 per cent., were totally ignorant. If we take all the children, under 8, as well as above, the proportion reaches 60 per cent.

Then taking the comparative education of prisoners in Ireland and in England and Wales, the figures are as follows:—Of men and boys 29 per cent. in England and Wales in 1875-76 could not read or write; in Ireland the proportion in 1877 was 38 per cent.; of women and girls, the English proportion of ignorant was 38 per cent., and the Irish was 54 per cent.

Thus whether we take the figures of 1871 or the figures of 1877, the inferiority of Ireland to England and Wales in the matter of education is placed beyond a doubt.

IV.—*What are the Modifications of English Acts of 1870-76 Necessary in Extending them in Ireland?*

As the compulsory clauses of the English Act are entirely independent of school boards, and apply to all the districts of England and Wales that are not under school boards, it is obvious that it is wholly unnecessary to postpone extending the benefits of compulsory education to Ireland until school boards are established; the whole question is thus reduced to the much simpler one of constituting school attendance committees.

Committees are in England to be appointed by guardians of the poor in all places except towns under town councils, or where urban sanitary authorities are by special order allowed to appoint them, where they are to be appointed by the town council or urban sanitary authority.

In extending this system to Ireland, there is a statutable disability to be borne in mind. In Scotland the parochial minister is an *ex officio* member of the local poor law board. In England clergymen are not excluded from being guardians, whilst they are excluded by statute from being guardians in Ireland. As clergymen are not excluded from school boards in England or Scotland (the majority, 8 out of 15, of the present Edinburgh school board

being clergymen), it would be wise to provide that the highest dignitary or senior minister of each of the two religious denominations that are most numerous in the union or town should by himself or named deputy, be an *ex officio* member of the school attendance committee. Again, it would be desirable in the constitution of those committees to introduce the principle of cumulative voting, so as to secure the representation of minorities, and not to limit the selection to members of the bodies appointing only.

In my evidence before the select committee on the local government of towns in Ireland in 1876, I recommended the introduction of cumulative voting, and I desire again to record my opinion that in the divided state of feeling in Ireland, there is no part of the United Kingdom where it is of more importance to introduce the system.

It is a misfortune that it was not introduced in the Reform Act of 1868, and the earliest opportunity of the creation or reconstruction of any new local authority in Ireland should be used to introduce a principle which has been so successful in England and Scotland in softening differences and in inducing people of different views to work together for the public good.

To school attendance committees constructed on any fair principle to secure the representation of all who are interested in the matter, there would be no difficulty in entrusting the powers conferred on such committees by the English Elementary Education Act.

V.—*Existing Facilities for the Adoption of the System of Compulsory Education in Ireland.*

Having explained how easily the system of English school attendance committees could be extended to Ireland, I have next to call your attention to some facilities for carrying out the system in which Ireland is much in advance of both England and Scotland.

The efforts of the State in Ireland since the commencement of the century—first in assisting voluntary societies, then in the expenditure of the Lord Lieutenant's School Building Fund, and since 1830 in the large annual grants to the National Board, with the rival efforts of persons and societies to promote denominational schools—have led to Ireland being studded with school-houses.

Then the large grant of 673,000*l.* a-year from the general taxes, under the excellent management of the National Board, has secured a large and efficient staff of schoolmasters. The questions which have been raised as to them is not any defect of numbers, but as to shortness of pay and want of superannuation. Again, the schools are so generally accepted by the people, that the children appear on the school rolls in great numbers; the defect is therefore not

in schools or in schoolmasters, but in attendance. This is shown in a very marked manner in a table published by the Irish Census Commissioners in 1871.

TABLE 4.—*Attendance at School in Ireland, Year ended 31st March, 1871.*

	Number.
Under 5 days	35,736
Five days and under 20 days.....	112,444
Twenty days and under 40 days	129,450
Forty days and under 80 days	218,982
Total under 80 days	496,612
Eighty days and upwards	498,198
Total in attendance.....	994,810

From this table it appears that of 1,000,000 children attending at some time of the year, only 50 per cent. attended 80 days and upwards; 22 per cent. attended between 40 and 80 days; 13 per cent. between 20 and 40 days; 11 per cent. between 5 days and 20 days; and 4 per cent. less than 5 days. This shows that the schools are conveniently situate, and that the parents who place so many children on the rolls have no objection to their children attending the schools. Let us consider for a moment what a change in the figures would be effected by the moderate compulsion of requiring the children to attend 80 days out of the 276 the school is usually open. By this change the adequate attendance would be raised from 36 to 72 per cent., as shown in the following tables:—

TABLE 5.—*Attendance at School in Ireland, Year ended 31st March, 1871.*

	Number.	Per Cent.
Children between 5 and 16	1,368,826	100
At school 80 days and upwards	498,198	36
„ from 1 to 79 days	496,612	36
Not at school at all	374,016	28

TABLE 6.—*Effect of Compulsion on Children on School Rolls in Ireland in 1871.*

	Number.	Per Cent.
Children between 5 and 16	1,368,826	100
At school for 80 days and upwards.....	995,810	72
Not at school at all	374,016	28

This amount of compulsion would require little trouble or

expense to effect. The names of children on the school rolls would afford a ready means of ascertaining all those whose attendance is below 80 days.

There would no doubt be payment of school fees out of rates, but if this did not attain greater dimensions than in Scotland, at the end of five years it would not amount to more than 10,000*l.* a-year, and in 1875 Parliament, in passing the National School Teachers' Act, 38 and 39 Vict., cap. 96, decided that it would be desirable to increase the remuneration of Irish schoolmasters from local rates. The schoolmasters would further gain by the school fees from the parents able to pay, and if these were arranged on a scale or at higher rate for shorter attendance, this would produce a legitimate increase to the schoolmaster's income.

In Scotland the working of the Act was at first somewhat marred by the prosecutions being all entrusted to local crown solicitors, which involved considerable expense. This has been remedied by the Act of 1878. In Ireland whilst the initiation of prosecutions would rest with the school attendance committees, as in England and Scotland, they might all, like other violations of statutes, be entrusted to the constabulary to conduct, so that there would be no costs except for petty sessions stamps; this would bring the system to the same as in England, where the penalty, including costs, is not to exceed 5*s.*

The proceedings would thus be facile, cheap, and not oppressive; and when 20,000 parents were prosecuted in England and Wales in 1877, this would give as corresponding figures 4,500. But as other offences against parental duty are about two-thirds the English proportionate figure, the prosecutions of parents in Ireland may be estimated not to exceed 3,000.

The example of these cases would check others, and so whole classes of offences commencing with neglect of parental duty would be nipped in the bud.

Another element of expense in Scotland and England would be much less in Ireland: as the Royal Irish Constabulary collect each year the agricultural statistics in great detail, they could for a very trifling expense collect the additional information as to children between 5 and 13 that were not on school rolls, distinguishing those that did or did not reside within 2 miles of a school. In this way the school attendance committee would be promptly and at small cost, supplied with full information for dealing with neglect not disclosed by school rolls; they would too have placed before them at a glance the parts of their district where there were children beyond the 2 miles' limit recognised in England, and so would know the exact requirement, if any, for new or additional schools.

VI.—*General Results to be Expected from the Constitution of School Attendance Committees with a View to Compulsory Education.*

One advantage that would arise from the constitution of these local school attendance committees, would be that the Irish education question would be presented to those bodies in its true aspect of investigation, how the duty of each parent was discharged towards his children in the matter of education, and of seeing that every child had justice done to it, and was being properly educated. It would be no longer a point of favouring one system or condemning another, but of testing how each parent acted under the system he himself approved of. In this way there is every reason to expect that the long contest between mixed and denominational education would be brought to a close, and that all earnest endeavours to promote education in accordance with the feelings and wishes of parents would be necessarily accepted, and receive equal treatment from the State.

Some thirteen years ago, when invited to address the Industrial and Reformatory School Union at the Manchester meeting of the Social Science Congress, I ventured to point out that industrial schools were as much required in Ireland as in England or Scotland, and that it was discreditable to our legislation to omit Ireland from the consolidated statute of 1866, which amended the code introduced in England and Scotland in 1861.

When some Irish members in the next session introduced a Bill to establish industrial schools on the English and Scotch plan in Ireland, they were met by the argument that the State was pledged to mixed education in Ireland, and that industrial schools were necessarily denominational. It was found, however, that that view could not be sustained in debate, and industrial schools were conceded to Ireland by large majorities in the Commons, and by a total absence of opposition in the House of Lords, and at the beginning of 1878 there were 4,854 children protected by these institutions, as compared with 1,852 in an equal portion of the population of England and Wales.

There can be no doubt that compulsory education, which is really an extension of the principle involved in industrial schools, tends to a similar conclusion, as the enforcement of parental duty under our free constitution necessarily involves the utmost parental liberty in the selection of the school. It changes the action of the State from the ambitious rôle of enforcing a system, to the more modest but more useful task of making certain of securing a satisfactory result.

In considering why this measure of compulsion has been so cordially accepted and developed in Scotland and England, the

extent to which the State has studied the wishes of the people should be well considered.

The Scotch Act of 1872 contains the preamble—"Whereas it has been the custom in the public schools of Scotland, to give instruction in religion to children whose parents did not object to the instruction so given, but with liberty to parents, without forfeiting any of the other advantages of the schools, to elect that their children should not receive such instruction, and it is expedient that the managers of public schools shall be at liberty to continue said custom."

Under this rule, in nearly all the board schools in Scotland, the schoolmaster is required to be well fitted to give religious instruction, and does give it subject to the conscience clause.

Besides these schools, so religiously conducted in accordance with the usages and wishes of the people, which receive 355,000*l.* a-year of the general taxes, grants are made out of the general taxes of 110,000*l.* a-year to denominational schools, of which the Roman Catholic schools receive 19,000*l.* a-year. When school fees are paid out of local rates, the parent may select any school that receives the parliamentary grant, so that local taxes as well as parliamentary grants can be and are applied to denominational schools in Scotland.

In England and Wales only 452,000*l.* is granted out of the general taxes to board schools, and 202,000*l.* to British and other schools, while no less than 1,344,000*l.* is given to denominational schools, of which Roman Catholics get 109,000*l.* a-year.

Again, in England as in Scotland local rates can be applied to pay school fees for poor parents at denominational schools, the school being selected by the parent; and Her Majesty's Inspectors of Schools are instructed "to maintain an entire impartiality between Schools under different kinds of management, and to avoid even the appearance of using their influence in favour of either Voluntary or Board Schools, or of taking a part in local differences in these matters;" and also, "that the Privy Council decline to interfere respecting the choice of books."

These arrangements, accompanied by the stringent conscience clauses, make compulsory education acceptable in England and Scotland, because it is truly and *bonâ fide* confined to the enforcement of parental duty.

In Ireland the part of the entire vote of 673,029*l.*, comparable to the above English and Scotch figures (568,000*l.*), is given to board schools alone. And in striking contrast to the English system, no school can share in the grant unless the books are approved of by the State appointed board, and unless the inscription *National School* is put up in the school without the addition of *any title of*

denominational character. The Christian Brothers, who after trying the State system in Ireland for a short time, withdrew in 1836 on conscientious grounds, not only receive no State assistance, but have had some of their endowments confiscated under the exception in the Roman Catholic Emancipation Act of 1829, which, strangely enough, still exists (ten years after religious equality has been so amply conceded to Ireland), and under which they are liable to be indicted for being in Ireland at all.

This confiscation by judicial decision has taken place since the report of the Royal Commission on Primary Education of 1870, the majority of whose members recommended that the rule of the national board as to religious instruction being confined to fixed hours, should apply solely to places where there was only one school for children of different denominations to resort to; but that where a Protestant and Roman Catholic school had both been in operation for upwards of three years in the same town or district, that a rule might be adopted which would allow Christian Brothers and other denominational schools to receive State assistance without departing from their principles.

The extreme diversity of State policy in Ireland as compared with England and Scotland, is shown at a glance in the following Table:—

TABLE 7.—*School Votes from General Taxes.*

<i>England and Wales—</i>		£
Church and Wesleyan schools		1,235,000
Roman Catholic schools		109,000
Society schools		202,000
Elective Board schools.....		452,000
<i>Scotland—</i>		
Presbyterian schools.....		82,000
Episcopal Church schools		8,000
Roman Catholic "		19,000
Elective Board "		355,000
<i>Ireland—</i>		
Denominational schools other than Roman Catholic }		—
Male Religious Order schools.....		
Christian Brothers and other Male Religious Order schools	[Endowments liable by Act of 1829 to confiscation.]	
Elective Board schools.....		—
Official "		568,000

The diversity of State policy on education in Ireland and in England explains why no demand* has been made for compulsory

* The question was raised but not pressed by Mr. O'Shaughnessey, M.P., in a debate in the House of Commons, on his resolution respecting primary education

education in Ireland. This diversity has, however, lasted so long that if compulsory education is to be accepted as a boon in Ireland, it would be wise to precede or accompany its enactment with some marked evidence that it is the enforcement of parental duty which is alone intended, and that it is not part of any policy of extending State interference or abridging the liberty of teaching in accordance with any foreign precedents.

The best steps to afford this evidence would be first the repeal of the exception in the Roman Catholic Emancipation Act of 1829, under which bequests to the Christian Brothers' Institution and other Religious orders have been declared void, and secondly, the adoption of the principle of the recommendations of the Primary Education Commissioners of 1870, under which denominational schools might share in the educational grant in all places where they were not the sole public school within the English 2 mile limit, and there were other schools to secure that their system was not forced on any who objected to it.

VII.—*Imperial Nature of the Question of Compulsory Education in Ireland.*

I cannot conclude without saying a word or two upon the imperial nature of the question which I have ventured to intrude upon your notice.

As primary education in Ireland has not been entrusted to local school boards as in England and Scotland, the responsibility of the results rests with the Imperial Parliament, and with all those thinkers, writers, and speakers who influence the public opinion of the United Kingdom, by which the decisions of parliament are so largely influenced.

This Irish education question affects the whole United Kingdom in another way which has not been at all sufficiently appreciated.

This arises from the extent of migration of the Irish people to Great Britain, which, commencing with the introduction of steam-boats, was accelerated by the great famine of 1846-47.

The figures are as follows:—

	Persons of Irish Birth in England and Wales.
In 1841.....	290,891
„ '51.....	529,959
„ '61.....	601,634
„ '71.....	566,540

in Ireland, 16th March, 1877. Mr. Butt pointed out the want of State recognition of voluntary effort in denominational education as the impediment to compulsion in Ireland. The concession I have suggested on this point, and the facts and suggestions in the paper meet, I find, most if not all of the objections to compulsion urged in the debate.

The number in Scotland in 1871 was 207,770, making in Great Britain 774,310.

These figures are familiar to all those who have examined the statistics of the census, but the way in which persons of Irish birth are distributed as to age and as to the part of the country in which they reside, has not attracted the same attention. The figures are shown in the following tables:—

TABLE 8.—*Proportion Above and Under Twenty Years of Age of Persons of Irish Birth and Non-Irish Birth.*

	Irish Birth.		Non-Irish Birth.	
	Number.	Per Cent.	Per Cent.	Number.
(a) IN ENGLAND AND WALES.				
Total	566,540	100	100	22,145,726
Under 20 years of age.....	67,807	12	47	10,314,646
Twenty years and upwards	498,733	88	53	11,831,080
(b) IN SCOTLAND.				
Total	207,770	100	100	3,152,248
Under 20 years of age.....	29,974	14	49	1,538,132
Twenty years and upwards	177,796	86	51	1,614,116

TABLE 9.—*Proportion of Adults of Irish Birth to Adults of Non-Irish Birth in Town and Rural Districts.*

	Irish Birth.	Non-Irish Birth.	Proportion.
(a) IN ENGLAND AND WALES.			
Twenty years and upwards	498,733	11,831,080	—
In 63 chief towns	282,375	4,025,428	1 to 14
„ rest of England and Wales	216,358	7,805,652	1 „ 36
(b) IN SCOTLAND.			
Twenty years and upwards	177,796	1,614,116	—
In 22 chief burghs	101,207	590,622	1 to 6
„ rest of Scotland	76,589	1,123,494	1 „ 14

It will be seen from Table 8 that amongst persons of Irish birth nearly 88 per cent. in England and 86 per cent. in Scotland are of 20 years of age and upwards.

Then from Table 9 it appears that the great majority of those of 20 years of age and upwards reside in the chief towns.

For this purpose I have taken the sixty-three chief towns shown in the English census and the twenty-two chief burghs shown in the Scotch census.

In these towns, taken in the aggregate, persons of Irish birth of 20 years of age and upwards are as 1 to 14 of those of the same age of non-Irish birth. In some of the towns the proportion must be still larger than this.

In the rest of England and Wales the proportion is only as 1 to 36.

In the twenty-two chief burghs in Scotland the proportion of persons of 20 years and upwards of Irish birth to those of same age of non-Irish birth is 1 to 6, whilst in some of the towns they form a much larger element of the adult population; in the rest of Scotland the proportion is as high as 1 to 14.

The extent of migration of persons of Irish birth thus disclosed has a very marked effect in bringing Irish labourers in direct competition with the labourers of England and Scotland. Any inequality in the encouragement by the State (out of imperial or local taxes) of the education of the labouring classes in Ireland as compared with those in England and Scotland involves an injury to the rising generation of Irish labourers in their competition for wages.

In their close contact with their English and Scotch fellow labourers which these statistics prove, they have forced upon their attention to an extent that the wealthier and more educated classes little think or know of, all the differences in the laws on this question of education and in the assistance to the poor, whether in payment of school fees or otherwise under the poor law, and when they find that the State takes greater care of children and of the poor in one part of the United Kingdom than in another, and pays greater respect to the feelings of some religious denominations than others, it is impossible to expect diversity of law and policy not to be an element in creating dissatisfaction.

In their migration in search of wages they have been brought in largest numbers into those parts of the United Kingdom where since 1868 the largest political power and privileges have been conceded to the class to which they belong. Any legitimate cause of dissatisfaction thus has a tendency to be a complication not alone in Irish but in imperial politics.

The remarkable migration which has a tendency to create this complication, at the same time, in the most irresistible manner, consolidates the union of the three kingdoms; but it no less irresistibly points as the solution of this and the remaining difficulties of the Irish question, to the policy to which at the commencement of this paper I ventured to call your attention, as enunciated some thirty years ago by Sir Robert Peel at the close of his career as Prime Minister.

“There ought to be established between England and Ireland a “complete equality in all civil, municipal, and political rights, so

“that no person viewing Ireland with perfectly disinterested eyes
“should be enabled to say a different law is enacted for Ireland,
“and on account of some jealousy or suspicion Ireland has curtailed
“and mutilated rights.”

VIII.—*Summary of Conclusions.*

I will now briefly repeat in a condensed form some of the leading conclusions of the preceding paper.

1. That compulsory education is more wanted in Ireland than it was when introduced in England in 1870, or in Scotland in 1872.

Children between 5 and 15 not attending school at one time being 54 per cent. as compared with 39 per cent. in England, and 30 per cent. in Scotland.

2. That the compulsory clauses of Mr. Forster's English Elementary Education Act of 1870, as amended by Lord Sandon's Act of 1876, might with appropriate modifications be advantageously extended to Ireland.

3. That Ireland being in the same position as the districts of England and Wales not under school boards, might have school attendance committees constituted like the English committees under the Act of 1876 for such districts, and so might have the benefits of compulsory education conferred without waiting for school boards.

4. That in constituting school attendance committees (to obviate the effect of the statutable exclusion of clergymen from boards of guardians in Ireland which does not exist in England or Scotland), the highest dignitary or senior minister of each of the two religious denominations that had the greatest number of inhabitants in the union or town, should in person or by deputy, be an *ex-officio* member of the school attendance committee.

5. That the other members of the school attendance committee should be selected by cumulative voting of the board of guardians in rural districts, and of the town councils or Urban Sanitary Authorities in towns.

6. That the statistics of children not on school rolls, and residing more than 2 miles from a school, might be collected by the Royal Irish Constabulary, along with the agricultural statistics, each year, so as to show from time to time the exact want of primary schools.

7. That prosecutions should be conducted by the police, but only after certificate from school attendance committee of gross and inexcusable neglect of parental duty.

8. That as evidence that compulsion was extended to Ireland solely for the purpose of enforcing the performance of parental duty, and not for the purpose of restricting the freedom of educa-

tion, the extension of compulsion should be preceded or accompanied with a repeal of the exceptions in the Emancipation Act of 1829, under which Christian Brothers and other Religious Orders have had their endowments confiscated, and with the adoption of the recommendation of the Commissioners of Primary Education in Ireland, which would allow of denominational schools sharing in the parliamentary grant in all districts where there were other schools to provide for those who objected to the system.

9. That the adoption of school attendance committees on a fair basis in Ireland by concentrating attention on the manner in which the duty of each parent was discharged towards his children, would have a tendency to terminate the long contest between mixed and denominational education, as all earnest endeavours to promote education in accordance with the feelings and wishes of the parents would be necessarily accepted and receive equal treatment from the State.

DISCUSSION *on* DR. W. NEILSON HANCOCK'S PAPER.

THE RIGHT HON. JAMES STANSFELD, M.P., said that he would have preferred to hear some discussion before venturing to offer any remarks of his own, but he was extremely glad to have the opportunity of meeting Dr. Hancock in London, and with many other inquiring Englishmen, he had reason to be grateful to him for a most hospitable reception in the capital of the sister isle. Those who had visited Ireland and known him there would be aware how influential he was in that country and in the capital, and that he took an unceasing interest in every question which concerned the welfare of Ireland. It appeared to him that Dr. Hancock in his paper had made good a considerable part of the propositions which he desired to establish, though in some respects further explanation might be desirable. He supposed they ought to be agreed, after the statistics they had heard, that as far as the condition of education in Ireland was concerned—the want of education and the need of procuring a greater attendance of children—there was at least as great necessity, if not greater necessity, for compulsion or some equivalent means of securing attendance in Ireland, as existed in England or Scotland in 1870 or 1872. Then came the practical question how that principle was to be applied, and whether it could be applied in Ireland as it had been applied in England and Scotland. Although the matter was being discussed before a scientific society, it was a sort of political question, but the political views must be regarded and discussed from a philosophical point of view. They would not be justified in endeavouring to solve this question purely from an English point of view, the condition of things and

the facts in Ireland being different from the condition of things and the facts in England and Scotland. In England, although there were the Established Church, and a number of dissenting bodies, there was not so marked a division as between the Protestant and Roman Catholic population of Ireland. In England compulsion had been brought to bear without much injustice to the conscience of parents, or the rights of parents or children. He would like to know whether Dr. Hancock considered that a statesman might not find greater difficulty in applying the principle of compulsion as he proposed in Ireland. In some parts of Ireland the population was almost exclusively Roman Catholic, the Protestant population being so sparse that Protestant children for the most part would live beyond the reach of schools, or the schools would be at an unreasonable distance. Compulsion should not be brought to bear upon children till measures had been taken to provide schools at which they could be reasonably expected to attend. The principle of compulsion should not be applied to the whole population merely for the purpose of securing the attendance of the majority of the children, the minority being left out. This difficulty was one of money more than anything else, and he therefore regarded it as not insuperable. Everyone present would be of opinion that money spent for the object of securing the education of the poor child-population of the country, and succeeding in that object, could not be spent in a better way. There were often discussions in the House of Commons upon the subject of economy, but he might say for himself and for their chairman, that neither of them had ever taken the narrow and unphilosophical view that economy consisted in the non-expenditure of money. He believed that saving was economy, but that profitable expenditure was still greater economy. He thought it would be the general opinion that Dr. Hancock had proved his case, so far as to show that there was need for compulsion to be applied to the education of the children of Ireland, and that there would be a justification for the application of the principle when it could be shown that every child in Ireland, and every parent in the performance of duty towards the child, had the opportunity of securing that education. That education would not be obtained by compulsion only, but it must also be secured as a fact that an efficient school at which a child could be compelled to attend should be brought within the reach of the child and of the parents.

PROFESSOR JEVONS, F.R.S., said that his acquaintance with Irish affairs did not qualify him to discuss a paper which dealt with Irish legislative difficulties, but he might nevertheless say that Dr. Hancock's arguments and figures seemed to be altogether conclusive as to the necessity for the extension of the English educational law to Ireland. There might be pitfalls and difficulties unknown to him, but in a statistical point of view the paper apparently placed the question beyond further doubt. They were a scientific society, and he did not think it was their duty before they expressed an opinion to take into account every difficulty that legislators might meet with. When the question

came before parliament, which he hoped it would do before long, it would be for the Government to see whether the religious difficulty was insuperable. Not many years ago the religious difficulty in England was thought to be insuperable, but within the last seven or eight years, it had almost vanished. With respect to the latter part of Dr. Hancock's argument, no doubt it was based on a selfish view of the matter. Irish education should be regarded primarily as a benefit to the Irish people, not to ourselves. But even if regarded from an English point of view, it was a very important matter. English workmen and trades unions might object to have poor ignorant Irish labourers brought over to contend with and under-bid them. Dr. Hancock had shown that there is, especially in the towns, a serious number of poor Irish labourers, and he quite agreed that the congregating together of poor ignorant Irishmen might be the source of very grave evils. It could not be known how much mortality, drunkenness and crime might be ultimately due to the ignorance of those allowed to grow up uneducated in Ireland and who migrated here. He hoped that some good practical result might ensue from the statistics which Dr. Hancock had submitted.

Mr. S. BOURNE said that the question of education generally was one of very great interest to him. True education was the greatest blessing which could be conferred upon any human creature. He demurred to treating this matter altogether from a statistical point of view. He thought it a danger attending such discussions as this Society pursued, that there was too much inclination to resort simply to the details of mere figures, and to put out of sight the far higher consideration of what those figures tended to, and what were the objects to be pursued in seeking for the welfare of the country generally. He agreed with Professor Jevons that the religious difficulty existing in England had become almost extinct; but he felt that it had been by agreement in the wrong direction. He feared that the difficulty had been got rid of by acting as if mere education in reading, writing, science, and art were of the highest importance, and neglecting moral and religious training. This was not a state of things calculated to increase the happiness of the people of our land, or enhance the greatness or glory of our country. He felt that they must make the results which mere figures could show subordinate to the higher consideration that the moral and religious welfare of the people is of the highest importance. The more they departed from the higher objects which could be attained in training up young people, the greater danger there was of the spread of the spirit of latitudinarianism, and the greater would be the difficulties in the way of promoting the welfare of the country. He did not speak in the sense of any denominational view, because he believed that what was wanted was not to raise up members in any religious sect or party, but to teach the higher duties which are owed by us all to our Maker, and to increase that spirit of charity, love and harmony which ought to pervade all classes of society, and on which he believed the good government of the land and the happiness and welfare of

the people entirely depended. He felt that they were in danger of losing sight of those great objects, and that therefore they must not depend too much upon what was shown by figures, but discuss more fully the principles by which they were guided, and not keep out of sight that which, to his mind, was of essential importance.

MR. THOMAS BRETT agreed very much with the general tenor of Dr. Hancock's paper, but his arguments in favour of his proposition that in constituting school attendance committees, to obviate the effect of the statutable exclusion of clergymen, the highest dignitaries should be placed upon the boards, failed to carry conviction to his mind. Dr. Hancock said that Ireland at the present time was in the condition of that portion of England which has no school boards. Dr. Hancock had shown that Ireland was far behind England and Scotland in education, and therefore any analogy drawn from the portion of England not under school boards, presumably the more advanced portion of the country, and applied to the education of Ireland, would lead to a great many fallacies and delusions. Statutable disability of the clergy was deplorable, and he considered it should be removed. He objected to a clergyman being *ex officio* a member of the school attendance committee; but he would be the last to deny a clergyman that position if he gained it by election. The difficulty he had observed was that wherever Church of England clergymen, priests, Presbyterian, Wesleyan, and other ministers met, there was a spirit of religious intolerance. They were often exceedingly well-disposed men, but as a rule their desire was first to advocate their own religion or creed, and secondly to advance the interests of education. He did not think that Dr. Hancock's proposition in favour of the clergy would work well, either in England, Scotland, or *à fortiori* in Ireland.

The PRESIDENT believed that there was so much unanimity upon Dr. Hancock's paper, that there was hardly material for discussion in the ordinary sense of the term. He would therefore content himself with moving a vote of thanks to Dr. Hancock. He need hardly remind them that Dr. Hancock was a most distinguished member, and he believed the founder of the Irish Statistical Society, whose contributions to political economy had been most valuable. He had himself largely consulted Dr. Hancock's works, and had found them a perfect mine of wealth upon matters not only relating to Ireland, but to England also. He could fully confirm what had been said by Mr. Stansfeld, as to the assistance which Dr. Hancock was always ready to give to those who were interested in Irish questions. He had himself availed himself of that assistance in a Irish subject, on which he had been engaged the last two years, and he was glad to have that opportunity of stating the immense obligations he was under to Dr. Hancock, without whose assistance it would have been impossible for him to have succeeded.

With regard to the paper before them, the facts brought forward by Dr. Hancock threw much light upon the subject of education

in Ireland. He had been under the belief that the great bulk of the Irish children were educated, and would bear favourable comparison with the children in this country at the present time, and much more favourable comparison a few years ago. The result of the figures brought forward by Dr. Hancock, showed that education in Ireland is far behind education in England and Scotland. It therefore seemed to him that it would be of the highest possible advantage to extend to Ireland the compulsion which England and Scotland now enjoyed. He was surprised that no Irish member had recently brought before Parliament the state of things in Ireland. He had listened with great interest to the part of the paper which showed the proportion of Irishmen in England, and also the very large proportion of those Irishmen who were fully grown men. The neglect to take this into account would probably account for many of the fallacies which writers had fallen into in comparing the crimes of Irishmen and Englishmen. It was quite possible that if they took into account the difference of age of Irishmen living here, they might account for differences in the proportion of crime and drunkenness, which some persons attributed rather to race than to other causes. However important it might be to Ireland that compulsion should be extended there, and that the education of the people should be improved, it was just as important to England, considering the large proportion of Irishmen who come here and mix with the population, and therefore have a bearing upon the people of this country. Looking upon the question from an English or Irish point of view, it appeared to be equally desirable that the system which in England and Scotland had been carried out with so much success, should be extended to Ireland. He did not believe it was beyond the scope of practical statesmanship to cope with the religious difficulty, and to extend to Ireland the benefits of compulsory education. With these remarks he proposed a vote of thanks to Dr. Hancock, which he was sure that every member then present would most cordially give.

Mr. G. ERRINGTON, M.P., in seconding the vote of thanks to Dr. Hancock, said he had not intended to address the meeting, but did so in order that it might not be supposed that the only Irish member present did not take an interest in this very important question. He congratulated Dr. Hancock upon his paper, which, while dealing with details, had still been exceedingly interesting. The question they were formally discussing was as to the possibility of introducing compulsory education into Ireland, but he thought they would feel they were in reality discussing the broader question as to how they could best advance the interests of education in Ireland. He thought, in spite of Dr. Hancock's arguments, that the question of introducing compulsory education into Ireland was, at the present time at all events, surrounded by enormous difficulties. Dr. Hancock had for instance suggested that the school attendance committees should be very much under the control of the clergy. His own impression was that unless they were under the control of the clergy they could not possibly be worked, but in case they were

so placed there would arise other difficulties from the opposite interests involved, and elements of jealousy, and he was not sure that parliament at the present moment would be inclined to introduce any such arrangements, or even face the question just now. He quite agreed, however, with Dr. Hancock as to the great need of beginning to lay the foundation of some system which should tend to alter the unsatisfactory condition of education which had been so picturesquely illustrated by the lecturer. He thought that might be done very completely by introducing some of the suggestions contained in Dr. Hancock's summary of conclusions. The public mind ought to be prepared for further necessary changes, by the portions of the Emancipation Act to which Dr. Hancock had referred being repealed. If that were done the ground would be to a great extent cleared, and it would be seen that in introducing this policy we did not desire in any way to compel consciences, but merely to press the enforcement of parental duties. All must feel the importance of insisting that all children should receive education of some sort; but he was bound to say that for the present he could not give his concurrence to all the views contained in the paper as to the feasibility or expediency of introducing compulsory education into Ireland at present.

Mr. WILLANS, in supporting the motion made by the Chairman, said that he had been particularly anxious to hear the views of gentlemen from the sister isle on a question which seemed to be so essentially one of Home Rule. But Dr. Hancock had taken the question out of the Home Rule sphere, and given reasons for treating it as an imperial one. They were much indebted to Dr. Hancock for his masterly paper, which was only in character with other papers for which they had been indebted to him during a series of years. He had shown them the necessity for compulsory education in Ireland; and that if there had ever been a case for it in England and Scotland, there was a still stronger case in Ireland. In view of the large proportion of adult Irishmen who came over and settled here, entering into competition with our workmen, and in the course of a short time becoming electors in England and Scotland, it was of imperial moment that this large element of our population should not come over in a dense state of ignorance, but that they should be so educated as to be able to do their work, and discharge all their duties with intelligence. The religious difficulties would be far greater in Ireland than they had been with us. He was going to ask Dr. Hancock if, in those districts where denominational schools happened to be the schools which the children would be compelled to attend, the parents could rely upon their children obtaining education without sectarian instruction. That was the real difficulty that would have to be met in Ireland. He hoped, with the Chairman, that the statesmanship of the House of Commons would be able to get over it. Objection had been taken to the proposals in the paper for the appointment of clergymen on the school committees. He for one would prefer that no clergymen of any denomination whatever should be a member of any school board or school committee, though he was able to cite

instances in which clergymen had gone upon English school boards with the strongest prejudices against the Education Act of 1870, and the utmost jealousy of its interference with the national schools; but the edges were soon rubbed off them, and they were now working admirably with their colleagues.

If they must have ministers of religion upon their school boards in Ireland, they ought to go simply upon election by the ratepayers; that would be the only tolerable settlement of that difficulty.

Dr. HANCOCK, in reply, said that he had been extremely gratified by the kind observations which had been made as to his paper; when he was asked to read a paper before the Society, he thought the best thing he could do was to give them an Irish question of sufficient difficulty to be worthy of their attention. What he wanted to present was the difficulty the English and Scotch people were responsible for, and Mr. Errington had appreciated the point as to getting rid of the offensive clauses in the Emancipation Act. The great difficulty was that Englishmen believed they had established religious equality in Ireland, but they had not done so. A committee of the House of Commons in 1872—on conventual and monastic institutions—inquired into that question, and he was greatly struck by the course of that inquiry. There were some influential members of the House upon the Committee, and an Irish member proved all the facts about the clauses of the Emancipation Act, and recommended that those clauses should be repealed. The committee adopted and reported to the House in full the statement of the grievances, but said the recommendation of the removal of the grievance was not referred to them, and the clauses remain unrepealed. In 1879, seven years afterwards, Irish members are blamed for not bringing forward the question of this violation of religious equality, but he considered that after the report of the committee in 1872, it ought to be brought forward by English or Scotch members. He could not defend Imperial Government in Ireland against those who were dissatisfied unless such disabilities were swept away. He found that the last instructions given by the Privy Council in England and circulated as a parliamentary paper to every Irish member, called special notice to the fact that the council did not interfere with the books in schools in England; but as to Ireland, the national board said that no grant should be given unless the books were approved of. Eighty per cent. of the children attended mixed schools. Legally they were mixed schools, *i.e.*, open to all, but as a matter of fact it ought to be known that they were not mixed schools. The Presbyterians had their national schools, the Episcopal Church had their national schools, and the Roman Catholics had their national schools. What was the use of insisting on the rule that not one halfpenny of public money should be given if the word Presbyterian was put over Presbyterian schools, Roman Catholic over Roman Catholic schools, and Irish Church over Irish Church schools? It simply produced dissatisfaction and led to no practical result. As to the machinery by which attendance committees should be constituted, it should

be borne in mind that he was not proposing school boards. He considered attendance committees as most probably only bodies of transition, and he wished to make a convenient arrangement for nominating people on them without expense. It was not fair to the clergy that they should have to be chosen by bodies in which they had not been allowed to sit, and he therefore proposed for the attendance committees to give them that position without election. He would take all the concessions that have been made in England or Scotland, and if it were desired that Ireland should be a contented part of the United Kingdom, it would be best for parliament to extend those privileges to Ireland in the completest possible manner, but at the same time with every possible consideration for Irish feelings and Irish ideas.

The Chairman having announced the subject of the next paper, the proceedings terminated.

MISCELLANEA.

CONTENTS :

	PAGE		PAGE
I.—General Results of the Commercial and Financial History of 1878	480	V.—The Movement of Travelers between European Russia and Foreign Countries from 1857 to 1876	528
II.—Bankers' Clearing House Returns, 1867-79	504	VI.—Farmers' and Landowners' Losses	535
III.—Lloyd's Statistics of Marine Casualties for the Year 1878	505	VII.—Notes on Economical and Statistical Works	539
IV.—Statistical Results of the last Census of France (1876)	522	VIII.—Additions to the Library during the Quarter, with Notes	543

I.—*General Results of the Commercial and Financial History of 1878.*

THE following extracts are from the supplement to the *Economist* of the 8th March, 1879, in continuation of a series of similar notices that have appeared annually in the *Journal* for each year since 1863:—

“1878 has been as much worse than 1877 as 1877 was worse than 1876. In 1878 we have had all the bad symptoms of 1877, but they have been greatly intensified by the failure of several large banks and the consequent collapse of a large number of trading concerns more or less dependent upon them, or if not dependent upon the banks, then brought down by the severe financial pressure of the last three months of 1878.

“At home the prices of commodities and wages have continued the decline which began in 1874, until, as will appear further on, we have at length reached a point of reduction not far short of the level of 1850-51—itself a sort of epoch in the low prices which began after the collapse of 1847, and were aggravated by the European convulsion of 1848-49. Of strikes in all trades and of all sizes, there have been incessant examples, with the almost uniform results of the defeat of the strikers. The harvest in this country was on the whole good, but the harvests in the United States and abroad were better, and the importations of wheat and corn have, consequently, been on a scale so great and at prices so low, as to neutralise the benefits of the abundance possessed by our own farmers. We shall have occasion to discuss in some detail the serious consequences to this country of the agricultural distress which has now become one of the most prominent facts in the state of affairs.

“The iron and coal industries have not improved, and 1878 has witnessed the failure of many of the largest and most powerful companies started in 1871-73, on the calculation that the high prices of those years indicated a permanently enhanced price for

coal and iron. The failures have extended over the whole country—South Wales, the Midland District, the North of England, and Scotland. In the latter country the failure of the Benhar Coal Company, a concern of great extent, has attracted much attention.

“As we have said, the harvest of 1878 in these islands was on the whole favourable and abundant, and as the following figures show, the price in October fell to 40s. 4d. as compared with 56s. in 1877:—

Gazette Average Price of Wheat (per Imperial Quarter) in United Kingdom, immediately after Harvest, 1871-78, and Total Average Gazette Price of Calendar Years.

Periods.	1878.	1877.	1876.	1875.	1874.	1873.	1872.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
After harvest	40 4	56 —	47 —	46 —	46 1	64 2	58 6
Calendar year } average	46 5	56 9	46 2	45 2	55 9	58 8	57 —

“But the following quotations from high authorities indicate that the abundance has not brought much relief to the farming interest. The *Mark Lane Express* says: ‘Although the crops of 1878 were undoubtedly less deficient than those of 1877, prices have ruled so much lower that there is little, if any, improvement in our farm balance sheets except in a few food districts of England and Scotland. We do not need exact statistics to show that such is the case, because we have other evidence in the form of lowered rents, vacant farms, and bankrupt tenants. The misfortunes of *four* deficient years have culminated in an agricultural depression which is as recognisable as it is lamentable, and it would be worse than useless to attempt to regard the gloominess of the farming outlook by turning our eyes away from it.’

“It is fortunate that in the autumn of 1878, after the harvest, Mr. James Caird, known for many years past as one of the best and most practical authorities on all farming subjects, published a book (*The Landed Interest*. London: Cassell and Co.), in which he discusses with remarkable knowledge and clearness the recent progress and present condition of agriculture in the United Kingdom.

“Mr. Caird gives the following table of the harvests of the last thirty years (1848-78):—

Harvests, United Kingdom, 1849-78. Estimate by Mr. James Caird of Produce in Bushels per Acre, reckoning Twenty-eight Bushels per Acre as an Average Crop, and representing that Average by 100.

Year.	Bushels per Acre.			Year.	Bushels per Acre.		
	Each Year.	Five Years.	Ten Years.		Each Year.	Five Years.	Ten Years.
1849	123	485	1,044	1864	127	527	1,038
'50	102			'65	110		
'51	110			'66	90		
'52	79			'67	74		
'53	71			'68	126		
1854	127	559		1869	102	476	
'55	96			'70	112		
'56	96			'71	90		
'57	124			'72	92		
'58	116			'73	80		
1859	92	511		1874	106	422	918
'60	78			'75	78		
'61	92			'76	76		
'62	108			'77	74		
'63	141			'78	108		

“ The summary of the above table will be:—

Years.	Under Average.		Over Average.	
	Years.	Bushels.	Years.	Bushels.
1849-53	2	50	3	25
'54-58	2	8	3	67
'59-63	3	28	2	49
'64-68	2	36	3	63
	9	122	11	204
1869-73	3	38	2	14
'74-78	3	72	2	14
	15	232	15	232

Note.—It is singular that in the thirty years the “ under and above ” should so evenly balance each other.

“ The evidence of this table is striking as regards the excessive badness of the seasons since 1869. In these ten years there have been six harvests where the under average is represented by 110, and only four above average, represented by 28; and among the

worst harvests in the whole thirty years were 1875-76-77, all in succession, and even 1878 is only represented by 108, against such high figures as 141 in 1863, 127 in 1864, 126 in 1868, and 112 in 1870. Taking the thirty years as a whole, as appears by the note, the "under" and "over" just balance each other, and as during the last ten years, 1869-78, the "under" have so largely predominated, it is a fair statistical inference that in the coming five and ten years the "over" should reappear.

"Mr. Caird exhibits in detail as follows the magnitude of the agricultural trades, and the table, it will be seen, does not include live stock:—

Agricultural Produce, Home and Foreign. Annual Growth and Importation of United Kingdom, 1877-78. (Mr. James Caird in Landed Interest, p. 14.)

[Quantities and values in millions of cwts. and £'s.]

Description.	Quantities in Million Cwts.			Value in Million Pounds.		
	Home Growth.	Foreign Growth.	Total.	Home Growth.	Foreign Growth.	Total.
I.				Mln. £	Mln. £	Mln. £
1. Wheat	55,0	55,0	110,0	32	32	64
2. Barley	44,0	11,0	55,0	20	5	25
3. Oats	64,0	12,0	76,0	29	5	34
4. Beans and peas	14,0	5,0	19,0	6	2	8
5. Indian corn	—	20,0	20,0	—	7	7
Total corn	177,0	103,0	280,0	87	52	139
II.						
6. Potatoes	111,0	5,0	116,0	17	1	18
7. Milk	—	—	—	26	—	26
8. Cheese and butter	3,0	3,0	6,0	13	14	27
9. Butcher's meat, } bacon, and pork }	24,0	6,0	30,0	87	22	109
Food other than corn	138,0	14,0	152,0	143	37	180
III.						
10. Wool	1,2	3,2	4,4	8	22	30
11. Hay	80,2	—	80,0	16	—	16
12. Straw sold for town } consumption	40,0	—	40,0	6	—	6
Wool and fodder	121,2	3,2	124,4	30	22	52
Total mln. cwts	436,0	120,0	556,0	—	—	—
Total mln. £	—	—	—	260	111	371

"Here is a home trade in cereals, dairy produce, fodder, and wool, of 260 million pounds per annum, and a foreign trade of 111 million pounds per annum, together the prodigious amount of 371 million pounds.

"In the following very important and instructive passage,

Mr. Caird collects evidence, showing the extraordinary prosperity which has been enjoyed by the landed and farming interest during the last twenty years, in consequence of scientific inventions and the general progress of the country :—

“ ‘In the twenty years, 1858-78, there has been a very considerable increase in the value of land in the United Kingdom, taking the test of the income tax returns. The improvement did not become apparent till 1858. In the previous year, 1857, the gross annual value of ‘lands’ was returned at 50,000*l.* less than eleven years previously, or in 1846. From 1858 the rise has been progressive and continuous, at an average rate of 470,000*l.* per annum in England and Wales. In Scotland the rise began earlier, and the average has been 82,000*l.* per annum. In Ireland there are no returns till 1862, and the yearly average rise is 39,000*l.* The rise in the three countries has been in the eighteen years (1857-75) a little over 20 per cent.

“ ‘The following table condenses the figures and gives the capitalised value of the total increase of annual value at the present prodigious price of land, say thirty years’ purchase :—

Increase in the Eighteen Years 1857-75, in the Gross Annual Value of Land in United Kingdom Assessed to Income Tax. (Caird, Landed Interest, p. 97.)

1	2	3	4	5	6	7	8	9
	Gross Annual Value of Lands.				Average Annual Increase.	Capital Value of Increase (5).		Eighteen Years 1857-75, Annual Increase of Value.
United Kingdom.	1857.	1875.	Increase 18 Years.	Total Increase 18 Years.		Years' Purchase.	Capital Value.	
	Mln. £	Mln. £	Per cent.	Mln. £	Mln. £	in.	Mln. £	Mln. £
England and Wales	41,2	50,1	21	8,9	0,50	30	268,4	15,0
Scotland	5,9	7,5	26	1,6	0,09	—	46,8	2,6
Ireland	47,1	57,6	22	10,5	0,59	—	315,2	17,6
	8,7	9,3	6	0,5	0,04	—	16,4	0,9
	55,8	66,9	20	11,0	0,63	—	331,6	18,5

“ ‘These striking increases of value, both annual and capitalised, have arisen chiefly from the great advance in the consumption and price of meat and dairy produce, and only in part as the result of land improvement. In the marshy corn districts, and in the chalk and sands, where grass does not thrive, the increase has been small. In the poor clay lands there has been no increase, the increase has been greatest in the grazing counties, and in the west and north the greatest increase has been in Scotland.’

“ ‘Mr. Caird explains at some length that he attributes the greater increase of rent and value in Scotland quite as much to better relations between landlord and tenant as to the greater grazing capacities of the country itself. He says that the Scotch landowner beats the English landowner for three chief reasons. The Scotchman has in his favour (1) an earlier and better education in and appreciation of the benefits of land improvement; (2) a better knowledge of the business of landowning; and (3) a greater readiness to enter into leases with his tenants, and so to settle

these leases, both as regards direction, and conditions, and renewal, as to give the tenant a substantial interest in farming in the best and most enlightened manner. In Scotland leases of nineteen and twenty-one years are the rule. In England they are the exception. The rule is a yearly tenancy.

"Upon the recent rapid increase of foreign food supplies, and the 'natural protection' of the British grower by reason of the cost and risk of transit which the foreign supplies have to sustain, Mr. Caird writes as follows:—

" 'The progressive increase of foreign supplies during the past twenty years (1857-78) is marvellous. The value of foreign cereal and animal food imported into the United Kingdom has increased from 35 million pounds in 1857 to 110 million pounds in 1876. The greatest proportional increase has been in the importation of animal food. Living animals, meat (fresh and salted), fish, poultry, eggs, butter, and cheese, have risen (1857-76) from 7 to 36 million pounds per annum. More than one-half of the farinaceous articles imported, other than wheat, are used in the production of beer and spirits.

" 'When the price of meat in this country, about fifteen or twenty years ago (1858-63), began to move steadily up, rising in a few years from 5*d.* to 7*d.*, 9*d.*, and even 12*d.* a pound, enterprise, with skill and capital, were called into rapid action to meet the growing demand. . . . The cost of transporting live animals from great distances is obviously considerable. This could be abated by the importation of fresh meat, and by the aid of specially contrived steam conveyance; large quantities of fresh meat have come from America during the colder part of the year. The Americans are greater consumers of meat, man for man, than the English. The English producer has the advantage of at least 1*d.* a pound for cost and risk of transport, as against his American competitor—an advantage equal to 4*l.* on an average ox. Of this natural advantage nothing can deprive him, and with this he may rest content.

" 'In 1868 the foreign supplies of the principal articles to the people of the United Kingdom was 20 per cent. (one-fifth) of the whole. In 1878 it has become 40 per cent. As regards wheat we now receive our bread in equal proportions from our own fields and from the foreigner. . . . In the United Kingdom we appear to have approached a point in agricultural production beyond which capital can be otherwise more profitably laid out than in further attempting to force our poorer class of soils. It has become cheaper for us, as a nation, to get the surplus of the richer soils of America and Southern Russia, or India.'

"Cattle Trade.

"The prices realised, it will be seen below, were lower, except for inferior mutton, than in either of the two preceding seasons:—

Per 8 lbs. by the Carcase.

Qualities.	1878.		1877.		1876.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Inferior beef	—	@ 3 4	2 6	@ 3 6	3 —	@ 3 4
Middling „	3 8	„ 4 —	4 —	„ 4 6	3 8	„ 4 4
Prime large beef	4 6	„ 4 10	4 9	„ 5 4	4 10	„ 5 2
„ small „	4 —	„ 4 8	5 4	„ 5 8	5 —	„ 5 4
Veal	5 —	„ 5 4			5 6	„ 6 —
Inferior mutton	3 —	„ 3 8	3 —	„ 3 6	3 —	„ 3 4
Middling „	4 —	„ 5 —	4 —	„ 5 —	3 8	„ 4 8
Prime „	5 —	„ 5 8	5 —	„ 6 —	5 6	„ 6 —
Large pork	3 —	„ 3 4	3 —	„ 3 6	3 4	„ 4 —
Small „	4 —	„ 4 8	4 —	„ 4 6	4 8	„ 5 4

"The extent of this country's increasing dependence upon a foreign supply of meat is shown by the following figures, the increase under the heads of living oxen and fresh beef imported being very striking:—

Meat of all Kinds Imported into the United Kingdom.

[In the values 000's omitted; thus 3,554, = 3,554,000£.]

Particulars.	Quantities.			Values.		
	1876.	1877.	1878.	1876.	1877.	1878.
<i>Animals, living—</i>				£	£	£
Oxen and bulls . No.	168,958	148,619	197,101	3,554,	3,243,	4,555,
Cows	58,520	25,404	29,354	1,097,	444,	494,
Calves	44,098	30,172	27,008	208,	130,	131,
Sheep and lambs ..	1,041,494	874,062	892,126	2,227,	2,107,	2,171,
Swine	43,558	20,037	55,911	172,	87,	200,
				7,260,	6,012,	7,454,
Beef, salted.....cwt.	243,342	208,364	219,445	477,	408,	417,
„ fresh	170,711	465,319	504,113	462,	1,266,	1,335,
<i>Meat (unenumerated)—</i>						
Salted or fresh cwt.	95,400	135,250	145,493	285,	403,	426,
Preserved other- wise than by } salting	280,859	470,712	438,903	884,	1,438,	1,313,
Bacon	2,809,990	2,395,223	3,466,565	7,510,	5,732,	6,695,
Pork, salted	350,151	295,524	369,500	736,	584,	611,
„ fresh	26,539	8,725	18,222	71,	23,	45,
Total meat importa- tions	—	—	—	17,688,	15,871,	18,300,

"There has been a steady increase per annum of cattle in the United Kingdom from 1866 to 1874, and thenceforward a gradual falling off. By grouping the twelve years into triennial periods, we may eliminate in some measure the minor fluctuations between one year and the next, and ascertain the average increase per cent., or the contrary, in each interval of three years' duration. The following table gives the figures for Great Britain and the United Kingdom:—

[000's omitted; thus 5,068 = 5,068,000.]

	Great Britain.	Ireland.	United Kingdom (including Islands).
Average head of cattle in period 1866, 1867, and 1868	5,068,	3,700,	8,800,
Average in period 1869, 1870, and 1871....	5,352,	3,837,	9,220,
„ '72, '73, „ '74....	5,896,	4,110,	10,050,
„ '75, '76, „ '77....	5,851,	4,076,	9,970,

"From 1874 we have been losing instead of multiplying cattle and sheep. The cattle census this year shows only 5,698,000 cattle

in Great Britain, which is a loss of 428,000, or 7 per cent. This is in three years. At this rate of diminution the head of cattle would be reduced to one-half in about twenty-one years. In Ireland the decrease in the three years has been 129,000, or more than 3 per cent. Sheep have decreased in Great Britain from 30,314,000 in 1874 to 28,161,000 in 1877, being a loss of 2,153,000, or 7 per cent., that is, the same disastrous rate of decrease as in the case of cattle. In the same time Irish sheep have fallen from 4,442,000 in 1874 to 3,989,000 in 1877, which is a loss of 453,000, or $10\frac{1}{4}$ per cent.

"There can be no doubt about the matter. It is not to be explained away by any wholesale discrepancy in the returns; for the progress up to 1874 and the relapse after that year to the present time are the same in England, in Wales, in Scotland, and in Ireland. The fact of a gradual discontinuance of cattle and sheep raising, or of a calamitous excess of mortality, runs steadily and regularly through the last three years of the statistics of all divisions of the United Kingdom.

"The general condition of the agricultural labourer in the United Kingdom was never better than it is at present.*

"From all this evidence there arises four fundamental conclusions:—

"1st. During the last thirty years 1849-78, but more particularly during the last twenty years 1859-78, there has prevailed throughout the entire agricultural interest of the United Kingdom a degree of prosperity and progress wholly beyond any former example, attributable (1) to increasing scientific practice and scientific discovery; (2) to the growth of trade and population, creating a demand for dairy and live stock produce; and (3) in some degree to better relations between landlords and tenants in the direction of putting an end to obsolete farming agreements.

"2nd. This prosperous and improved condition has extended to all the agricultural classes, not excluding the labourers.

"3rd. The occurrence, since 1869, of six bad harvests out of ten; (2) the rapid development since 1873 of cheap steam and rail transit for live and dead meat, as well as for grain from the United States and elsewhere; and (3) the prevalence of cattle plague, and the large consequent losses, have at length reduced the farming

* *Agriculture in England, 1770, 1850, and 1878, as shown by the comparison as under.* (James Caird, *Landed Interest in 1878*, p. 157.)

Description.	1878.	1850.	1770.
Produce of wheat per acre..... bshl.	28	26½	23
	s. d.	s. d.	s. d.
Rent—cultivated land p. acre	30 —	27 —	13 —
Price of bread per lb.	— 1½	— 1¼	— 1½
„ meat „	— 9	— 5	— 3
„ butter „	1 8	1 —	— 6
Agricultural labourer's cottage week	2 —	1 5	— 8
„ wages .. „	14 —	9 7	7 3

interest to great distress—a distress which points to a speedy and large reduction of rents and to a speedy and radical revision of the conditions under which the land in this country is held and let, so as to take advantage of every circumstance which can increase the natural and inevitable protection which the proximity of the farmer to the home market gives him over the foreigner.

“4th. That the whole course of the facts since 1846 affords triumphant testimony of the effect of free trade in securing abundance and cheapness to the consumer, and in placing the cultivators and owners of land under the most wholesome stimulus to apply increasing skill and capital to the business.

“The incessant discussions which have been carried on during 1878 relative to the causes of the commercial distress, stimulated as these discussions have been by a small and almost contemptible cry for revised protection under the guise of reciprocity, are leading to a kind of general agreement that the real origin of the distress is to be found in the eight causes which we set out with some care in this review last year (1877), and the year before (1876).^{*} These causes in outline are (1) the extravagance, idleness, want of care, recklessness, and miscalculation, which marked the conduct both of the employing and employed classes in this and other countries in the inflation years 1871-73; (2) the waste of capital in useless works, hollow enterprises, and swindling foreign loans; (3) pestilence and famine in India and elsewhere; (4) wars and political alarms and bloated armaments in Prussia, France, Russia, and the continent generally; (5) the losses and distress entailed by four bad harvests in succession, and by cattle plague, and failure of root and hay crops; and (6) lastly, the limitation of hours of labour and diminished efficiency of labour irresistibly leading to greatly enhanced cost of production in almost all commodities, upon the extending sale of which the trade of this and other countries depends.

^{*} The following figures show that in other countries, as well as in the United Kingdom, exports of merchandise have declined:—

Exports of Merchandise, 1876-77. Mln. £. (Economist, January, 1879.)

Exports from	1877.	1876.	1877, Less.	
				Per cent.
France	175	181	6	3
Belgium	80	83	3	3
Italy	40	52	12	23
Hambro' (transit)	58	85	27	32
	353	401	48	12
United Kingdom	252	256	4	—
Mln. £	605	657	52	12

"As regards the waste of the capital of this country in foreign loans, the following table from the report of the Royal Commission (1875-77) on the Stock Exchange is worth preserving:—

Foreign Loans Issued in London, with the Results, according to the Market Lists of 1877-78. (Mr. Medley, Appendix Report Royal Commission, Stock Exchange.)

[In Mln. £: 89,0 = 89,000,000L.]

When Principally Issued.	Borrowing Countries.	Obligations Fulfilled.		
		Wholly.	Partly.	Total Default.
		Mln. £	Mln. £	Mln. £
1860-73	Turkey	—	—	89,0
'60-73	Peru	—	—	26,0
'60-64	Mexico.....	—	—	16,0
'60-64	Venezuela	—	—	4,6
'67	Honduras	—	—	3,5
'71	Uruguay	—	—	2,3
'72-74	Paraguay.....	—	—	3,0
'72	Bolivia.....	—	—	1,7
'71	Costa Rica	—	—	3,4
'64	Confederate States.....	—	—	2,4
	Various	—	—	5,2
				157,2
1862-73	Egypt	—	45,6	—
'65	Austria	—	6,9	—
'59-70	Alabama	—	1,0	—
'63	Columbia.....	—	1,5	—
	Russia	114,8	—	—
1870-72	France	50,0	—	—
	Italy	22,3	—	—
	Brazil	20,0	—	—
1868-74	Argentine Confederation	5,7	1,0	—
'62-69	Portugal	16,7	8,7	—
'68-74	Hungary	16,0	—	—
'58-75	Chili.....	5,6	0,7	—
'70-73	Buenos Ayres.....	2,0	0,7	—
	Denmark.....	7,8	—	—
1870-73	Japan	2,2	—	—
	Sweden	4,5	—	—
1864-70	Danubian Principalities	1,7	—	—
		268,3	65,4	
	Various	13,5	0,8	
	Total, 405 mln. £.....	281,8	66,2	157,2

Note.—In addition to the above, Spain is put down as being 109 million £ in "partial default." But the changes and manipulations of the Spanish have been so endless, that it is better to give the figures only in the form of a note.

"Here we have 157 million pounds in total, and 66 millions in partial default, or together 223 millions, which in the course of a few years has been worse than wasted, inasmuch as it has directed

labour and skill into false channels, and has spread dishonesty and corruption broadcast.

"In the United States there are very distinct signs of commercial revival. Three or four productive harvests; cost of railway and canal transit reduced almost to a vanishing point by reason of the excess of means of conveyance over the traffic to be conveyed; the stern lessons of adversity in the form of insolvencies and failures penetrating far even into the retail branches of trade; Federal, State, city and county taxes, and debt, which have carried away no small part of every man's income—all these causes have established in North America a condition of trade far sounder than has prevailed for more than twenty years. And the full re-establishment of cash payments from 1st January, 1879, has provided a solid basis on which the calculations for the future may rest.

"Gold and Silver.

"At a time when attention is particularly directed to topics such as the above, more especially with reference to a suggestion which has been made, to the effect that the depression of trade and great fall in prices are traceable to a growing scarcity of gold, arising chiefly from the decline of the annual production of that metal, it is thought advisable to collect.....a variety of facts from various quarters, but without attempting in this place to construct any theory out of them.

"The following table gives in a concise form in periods of five years the total world production of gold and silver. These figures do not exhibit, since 1872, any marked decline in gold:—

Gold and Silver. Average Annual Production of the World in Periods of Five Years, 1842-77, and Relative Proportion of the two Metals. (New York Chronicle, 25th January, 1879.)

[In Mln. £; thus 10,1 = 10,100,000£.]

Five Years.	Gold.	Silver.	Proportion, Gold to Silver.	Five Years and 1877-78.	Gold.	Silver.	Proportion, Gold to Silver.
	Mln. £	Mln. £	1 to		Mln. £	Mln. £	1 to
1842-46	10,1	8,7	0,86	1867-71	24,6	10,6	0,43
'47-51	15,0	8,1	0,54	'72-76	22,3	14,0	0,62
1852-56	29,0	8,1	0,28	1877-78	22,8	15,6	0,69
'57-61	25,4	8,2	0,32	—	—	—	—
1862-66	24,8	10,1	0,39	—	—	—	—

"The next table is important, as showing the vast expansion since 1871 of the metallic reserves of the great continental banks, an expansion which appears to be in gold from 57 million pounds in 1873 to 116 million pounds in 1878; and in silver from 3 million to 59 million pounds in 1878. The table must be considered as approximate only.

Metallic Reserve of the Great Banks, 1850-78, distinguishing Gold and Silver.

[In Mln. £; thus 15,5 = 15,500,000L.]

Years.	Bank of England.		Bank of France.		Bank of Germany.		Bank of Austria.		Treasury, U. States.		Totals.		Proportion of Silver to Gold.
	Gold.	Silvr.	Gold.	Silvr.	Gold.	Silvr.	Gold.	Silvr.	Gold.	Silvr.	Gold.	Silvr.	
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Per cent.
1850	15,5	—	1,6	17,2	—	—	—	—	—	—	17,1	17,2	100
'55	11,0	—	2,1	6,2	—	—	—	—	—	—	13,1	6,2	52
'60	13,0	—	5,5	10,5	—	—	—	—	—	—	18,5	10,5	60
1865	14,0	—	12,7	4,9	—	—	—	—	—	—	26,7	4,9	18
'70	23,0	—	17,2	2,7	—	—	—	—	—	—	40,2	2,7	7
Average .	15,2	—	8,0	8,3	—	—	—	—	—	—	23,2	8,3	49
1871	25,0	—	22,1	3,3	—	—	—	—	—	—	47,1	3,3	7
'72 ...	24,0	—	26,4	5,3	—	—	—	—	—	—	50,4	5,3	10
1873	22,6	—	24,5	6,3	10,0	25,0	—	14,2	—	—	57,1	46,5	80
'74	21,5	—	40,5	12,5	10,0	25,0	—	14,4	—	—	72,0	38,0	52
Average .	23,3	—	28,3	6,7	—	—	—	—	—	—	—	—	—
1875	22,0	—	47,0	20,2	20,0	10,0	—	14,0	—	—	80,0	44,2	55
'76	28,4	—	61,2	25,5	20,0	7,0	—	13,6	12,0	—	121,6	44,1	36
'77	24,0	—	47,1	34,6	20,0	5,0	—	13,6	21,0	—	112,1	55,8	50
'78	28,0	—	39,3	42,3	20,0	3,0	—	14,0	28,5	—	115,8	59,3	51
Average .	25,6	—	48,6	30,6	20,0	6,2	—	13,8	—	—	—	—	—

Note.—For the figures relating to the Bank of France, see article in the *Economist*, 8th February, 1879. The Bank of Germany is chiefly estimated as regards the quantities of the two metals.

“We limit ourselves here to the insertion of the following usual table of the shipments, &c., of silver to the East:—

Silver, 1878-66, Shipments to East, Bills Drawn by India Council on India, Imports of Silver into United Kingdom, Average Price in London, and Average Rate of Bank Discounts. (Pixley and Abell's Circular.)

[0,000's omitted, thus 5,84 = 5,840,000.]

Years.	Silver sent to East.	Bills Drawn by India Council.	Imports of Silver into United Kingdom.	Silver Coined in United Kingdom.	Average Price Standard Silver in London.	Average Bank-Rate Discount.
	Mln. £	Mln. £	Mln. £	Mln. £	Per oz.	£ s. d.
1878	5,84	13,98	11,45	0,61	52 $\frac{9}{16}$	3 15 8
'77	17,00	8,64	21,62	0,42	54 $\frac{7}{8}$	2 18 -
'76	10,91	11,51	13,56	0,22	52 $\frac{3}{4}$	2 12 1
1875	3,71	10,84	9,50	0,59	56 $\frac{7}{8}$	3 4 8
'74	7,09	13,28	11,80	0,89	58 $\frac{5}{16}$	3 13 10
'73	2,50	13,94	12,30	1,08	59 $\frac{1}{4}$	4 15 10
'72	5,65	10,31	11,14	1,24	60 $\frac{5}{16}$	4 2 -
'71	3,71	8,44	16,52	0,70	60 $\frac{1}{2}$	2 17 8
1870	1,58	6,98	10,65	0,33	60 $\frac{1}{2}$	3 2 -
'69	2,36	3,70	6,73	0,07	60 $\frac{7}{16}$	3 4 2
'68	1,63	4,14	7,71	0,30	60	2 1 11
'67	0,64	5,61	8,02	0,19	60	2 10 9
'66	2,36	7,00	10,78	0,49	61 $\frac{1}{8}$	6 19 -

“As regards the large and general question of the permanent or temporary continuance of the present low price of silver, we cannot add anything to the soundness and clearness of the following statement of the facts and of the inferences which they justify:—

“The Indian Council Bills offered on 12th February, 1879, were tendered for at 1s. 7 $\frac{1}{16}$ d. per rupee—that is, 5d. within a very small fraction was lost in every rupee, or almost one-fifth. If present rates last, therefore, all who have to send money from India to England will have to look forward to a loss by exchange of one-fifth of the sum transmitted. So far as the Indian Treasury is concerned, this would be over three millions per annum. It is little wonder, then, that there should be persistent reports that plans have been submitted to the Indian Government for the correction of the exchanges. We commented upon one of these plans some time ago, and there is talk of others; but we do not propose to consider them at present.”

Cotton.

“Ellison and Co. (Liverpool) report:—

“1878 was a year of unparalleled commercial depression unprecedented for the universality of its incidence and the ruthless thoroughness of its ramifications; a depression as widespread as the world and ubiquitous as trade itself. The commercial and financial upturning of previous times were more or less local, but the crisis of 1878 extended to every civilised and semi-civilised nation. This untoward state of things was the result of the over-production, inflated values, general extravagance, and unsound finance, which reigned without let or hindrance between 1870 and 1873, subsequently aggravated by the financial shifts and bolsterings to which resort was had in the vain attempt to stem the tide of reaction which commenced in 1874, and further intensified by the diminished power of consumption occasioned by the reaction itself, and by deficient food crops in Europe, and the famines in India and China. To this thorough and international character of

the depression must be traced the tardy convalescence of trade, which has caused so much bewailing and disappointment during the past two years.

“The cotton industry, in common with other industries, has had to take its share of the general depression, but it has, besides, had to contend against an adversity special to itself. Until the incoming of the new American crop the supply of the raw material was insufficient to meet even the reduced requirements of consumers, occasioned by a diminished demand for their goods. Short time notwithstanding, the stock of cotton in the world showed a chronic deficit compared with 1877, amounting at one time to 700,000 bales. The result was that the price of the raw material did not respond to the fall which took place in the value of yarns and goods. If the supply of cotton had been a full one, prices in Liverpool would have followed the decline in Manchester, and middling upland would have been at 5*d.* per lb. early in the year, instead of only in December, while the average for the year would have been much lower than the actual average of 6½*d.* The extent to which this additional adversity has injured spinners and manufacturers is shown in the following comparative statement of the average prices of cotton, yarn, and goods during the past three years:—

Description.	Average Prices per Pound.			1878 compared with	
	1876.	1877.	1878.	1877.	1876.
<i>Cotton—</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
Middling upland	6½	6 ⁵ / ₁₆	6½	¼ lower	⅛ lower
Fair Dhollerah.....	4½	5 ³ / ₁₆	4½	¼ „	7/16 higher
<i>Yarn, best seconds—</i>					
30's water twist	11 ³ / ₁₆	10 ⁵ / ₈	9 ⁹ / ₁₆	1 ¹ / ₁₆ „	1 ⁵ / ₈ lower
40's mule twist.....	11¼	10 ³ / ₁₆	9½	1 ⁵ / ₁₆ „	1¼ „
<i>Cloth, per lb.—</i>					
Printers, 4¼ lbs.	11 ⁷ / ₁₆	11 ⁹ / ₁₆	10 ³ / ₁₆	¾ „	⅝ „
„ 5¼ „	12 ⁹ / ₁₆	12 ⁷ / ₁₆	11½	1 ⁵ / ₁₆ „	1 ¹ / ₁₆ „
Shirtings, 7 „	11 ³ / ₈	11 ¹ / ₈	10 ⁷ / ₁₆	1 ¹ / ₁₆ „	1 ⁵ / ₁₆ „
„ 8¼ „	10 ⁵ / ₄	10½	9 ⁷ / ₁₆	1 ¹ / ₁₆ „	1 ⁵ / ₁₆ „
<i>Average prices—</i>					
30's and 40's twist	11¼	10¾	9 ⁹ / ₁₆	1 ³ / ₁₆ „	1 ¹ / ₁₆ „
Printers and shirtings.....	11 ⁹ / ₁₆	11 ⁷ / ₁₆	10 ⁹ / ₁₆	7/8 „	1 „
<i>Margin between—</i>					
Uplands and twist	5	4 ⁷ / ₁₆	3 ⁷ / ₁₆	1 less	1 ⁹ / ₁₆ less
„ cloth	5 ⁵ / ₈	5½	4 ⁷ / ₁₆	1 ¹ / ₁₆ „	7/8 „

“*Consumption of Cotton in the World.*—In the following statement we give an approximate account of the quantity of cotton consumed in each country in Europe, and in the various groups of countries in Asia, Africa, America, and Australia. The population figures represent 1,000's (86,260 = 86,260,000); the quantities of cotton and cotton goods represent millions of pounds (142,5 = 142,500,000 lbs). There are three columns of quantities: 1st, the raw cotton spun in each country; 2nd, the weight of goods and yarn imported into each country from Great Britain; and 3rd, the total of these two. The table also shows the *per capita* consumption of each country of raw cotton, of goods, &c., imported from England, and the aggregate of both. The population of Russia includes that of Asiatic Russia. The whole of the figures refer to the year 1877; the complete returns for 1878 not being yet published. In the column of ‘Goods, &c., imported from Great Britain,’ there is a blank opposite Switzerland, because the ship

ments are sent *via* other countries. A large part of the Swiss production goes to Turkey and to various continental countries. Part of the production of Holland goes to Java, and part passes to Germany, Switzerland, &c. Belgium also forwards largely to the interior of the continent. The exceptionally large consumption of cotton in the United States is owing to the smaller *per capita* consumption of wool and flax compared with Europe; moreover, the figures include the goods imported:—

Countries.	Population.	Raw Cotton Consumed.		Goods, &c., Imported from Great Britain.		Total Consumption.	
		lb.	Per hd.	lb.	Per hd.	lb.	Per hd.
Russia	86,260,	142,5	1'65	2,6	0'03	145,1	1'68
Sweden and Norway	6,291,	24,8	3'94	8,0	1'27	32,8	5'21
Denmark	2,023,	—	—	5,0	2'47	5,0	2'47
Germany	42,727,	249,1	5'83	65,2	1'52	314,3	7'35
Austria	37,331,	101,3	2'71	7,9	0'21	109,2	2'92
Holland	4,130,	13,8	3'34	43,0	10'41	56,8	13'75
Belgium	5,336,	43,2	8'09	17,4	3'26	60,6	11'35
Switzerland	2,776,	42,5	15'30	—	—	42,5	15'30
France	36,906,	230,0	6'23	19,9	0'54	249,9	6'77
Spain and Portugal	21,275,	79,9	3'75	25,7	1'21	105,6	4'96
Italy and Malta	26,948,	52,8	1'96	51,1	1'59	103,9	3'85
Greece	1,450,	—	—	6,9	4'75	6,9	4'75
Turkey, Roumania, } &c.	15,353,	—	—	37,0	2'40	37,0	2'40
Total	288,806,	979,9	3'29	289,7	0'99	1,269,6	4'38
Russia	86,260,	142,5	1'65	2,6	0'03	145,1	1'68
Rest of Continent ...	202,546,	837,4	4'11	287,1	1'41	1,124,5	5'52
Great Britain	34,160,	195,7	5'72	—	—	195,7	5'72
Total Europe ...	322,986,	1,175,6	3,63	289,7	0'89	1,465,3	4'52
Turkey, Persia, &c....	24,540,	—	—	38,0	1'54	38,0	1'54
India	250,000,	295,0	1'18	330,0	1'32	625,0	2'50
China	435,000,	1,000,0	2'29	100,0	0'23	1,100,0	2'52
Japan	33,620,	65,0	1'98	20,0	0'59	85,0	2'52
Siam, Java, &c.	12,500,	—	—	30,0	2'40	30,0	2'40
Total Asia	755,660,	1,360,0	1'79	518,0	0'69	1,878,0	2'48
Egypt and N. Africa	17,000,	—	—	34,0	2'00	34,0	2'00
W., S., and E. Africa	13,000,	—	—	28,0	2'15	28,0	2'15
Interior of Africa ...	200,000,	—	—	—	—	—	—
Total Africa ...	230,000,	—	—	62,0	0'26	62,0	0'26
U. States and Canada	48,850,	628,0	12'85	22,0	0'45	650,0	13'30
Central and South } America, and } West Indies	43,250,	—	—	135,0	3'12	135,0	3'12
Total America....	92,100,	628,0	6'82	157,0	1'70	785,0	8'52
Australia	2,650,	—	—	15,0	5'66	15,0	5'66
The World	1,403,396,	3,163,6	2'26	1,041,7	0'74	4,205,3	2'98

"Official reports show that the consumption of cotton goods in India is about $2\frac{1}{2}$ lbs. per head per annum. We have assumed that a similar rate of consumption obtains in China and Japan.

"There is no reliable data upon which to form an estimate of imports from other quarters. The Brazils will probably send 100,000 bales, against 131,000 last year; Smyrna 40,000, against 48,000; and the West Indies, &c., 50,000, against 43,000 bales.

An Estimate of the Value of the Production of Cotton Manufactures in Great Britain, with the Cost of Cotton Consumed, and the Balance Remaining for Wages, all other Expenses, Interest of Capital and Profits, for each of the Past Twelve Years.

[In million pounds; 80.7 = 80,700,000.]

Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses.	Year.	Total Value of Goods Produced.	Cost of Raw Cotton.	Left for Wages, Profit, and other Expenses.
	Mln. £	Mln. £	Mln. £		Mln. £	Mln. £	Mln. £
1878....	80.7	30.3	50.3	1872....	102.2	48.0	54.2
'77....	87.3	32.5	54.7	'71....	101.9	40.8	61.1
'76....	88.7	32.8	55.9	'70....	93.1	42.1	51.0
'75....	95.4	36.5	58.9	'69....	86.1	43.7	42.4
'74....	100.5	40.2	60.3	'68....	91.7	40.9	50.7
'73....	104.6	45.4	59.1	'67....	90.4	41.2	49.1

Cotton Cloth and Yarn, Exported and Estimated as Actually Consumed at Home, 1878-66, in Millions of Pounds Weight. (Ellison's Circular.)

[000,000's omitted.]

1	2	3	4	5	6	7	8	9
Years.	Yarns and Cloth Exported.			Home Consumption, Yarns and Cloth.	Total Weight.	Average Prices of Raw Cotton.		
	Yarn.	Cloth.	Total.			Imported.	Exported.	Home Consumption.
	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Mln. lbs.	Per lb. d.	Per lb. d.	Per lb. d.
1878....	250,	702,	952,	101,	1,053,	$6\frac{1}{10}$	$5\frac{1}{10}$	$6\frac{1}{10}$
'77....	227,	746,	973,	105,	1,101,	$6\frac{1}{4}$	$5\frac{3}{10}$	$6\frac{5}{10}$
'76....	232,	735,	967,	164,	1,131,	$6\frac{1}{8}$	$5\frac{1}{4}$	$6\frac{3}{10}$
'75....	215,	713,	928,	160,	1,088,	$7\frac{1}{10}$	$5\frac{7}{8}$	$7\frac{1}{8}$
'74....	220,	726,	946,	173,	1,120,	$7\frac{1}{2}$	6	$7\frac{5}{8}$
1873....	215,	688,	903,	175,	1,077,	$8\frac{5}{8}$	7	$8\frac{3}{4}$
'72....	212,	698,	910,	129,	1,055,	$9\frac{5}{10}$	$7\frac{1}{2}$	$9\frac{3}{4}$
'71....	193,	680,	873,	199,	1,058,	8	7	$8\frac{1}{4}$
'70....	186,	616,	802,	140,	942,	$9\frac{1}{2}$	$8\frac{1}{2}$	$9\frac{3}{4}$
1869....	169,	535,	704,	112,	829,	$11\frac{1}{4}$	10	$11\frac{1}{4}$
'68....	174,	548,	723,	160,	883,	$9\frac{1}{2}$	$8\frac{3}{4}$	$9\frac{1}{2}$
'67....	164,	523,	687,	145,	832,	$10\frac{1}{2}$	$9\frac{1}{2}$	$10\frac{3}{8}$
'66....	134,	491,	625,	145,	770,	$13\frac{1}{2}$	$11\frac{1}{8}$	14

Exports of Cotton Piece Goods, 1878-75, in Quantities (Millions of Yards) and Percentage of Totals. (Ellison's Circular.)

[000,000's omitted, thus 1,387, = 1,387,000,000.]

Exported to	Quantities.				Per Cent. of Total.			
	1878.	1877.	1876.	1875.	1878.	1877.	1876.	1875.
	Mln. yds	Mln. yds	Mln. yds	Mln. yds.	Per cent.	Per cent.	Per cent.	Per cent.
India and Egypt	1,387,	1,546,	1,400,	1,344,	38'3	40'3	38'2	37'8
China	478,	527,	597,	436,	13'2	13'7	16'3	12'2
Turkey and Levant	374,	290,	323,	282,	10'4	7'6	8'8	7'9
United States	2,239,	2,363,	2,320,	2,062,	61'9	61'6	63'3	57'9
Rest of America	48,	61,	55,	80,	1'3	1'6	1'5	2'2
and West India }	564,	606,	508,	556,	15'6	15'8	13'9	15'6
Italy, Austria, &c.	2,851,	3,030,	2,883,	2,698,	78'8	79'0	78'7	75'7
Germany.....	196,	218,	237,	214,	5'4	5'7	6'4	6'0
Other countries	115,	128,	103,	116,	3'2	3'3	2'8	3'3
	456,	460,	445,	532,	12'6	12'0	12'1	15'0
	3,618,	3,836,	3,668,	3,560,	100'0	100'0	100'0	100'0

United Kingdom, 1878-66. Estimated Value of Raw Cotton Imported, Re-Exported, and Consumed. (Ellison's Circular.)

[00,000's omitted, thus 33,3 = 33,300,000. The bales are given in full.]

Years.	Import.		Re-Exported.	Consumed, United Kingdom.		
	Value.	Price.	Value.	Value.	Weight.	Bales per Week, 400 lbs. each.
	Mln. £	Per lb. d.	Mln. £	Mln. £	Mln. lbs.	No.
1878.....	33,3	6 $\frac{1}{10}$	3,4	30,3	1,176,	56,560
'77.....	34,0	6 $\frac{1}{4}$	4,0	32,5	1,237,	59,510
'76.....	37,2	6 $\frac{1}{8}$	4,2	32,8	1,274,	61,250
'75.....	42,9	7 $\frac{1}{16}$	6,1	36,5	1,230,	59,160
'74.....	47,1	7 $\frac{1}{2}$	6,0	40,2	1,266,	60,870
'73.....	54,2	8 $\frac{5}{8}$	6,1	45,4	1,246,	59,910
'72.....	53,3	9 $\frac{5}{16}$	8,5	48,0	1,175,	56,510
1871.....	55,9	8	9,8	40,8	1,205,	57,950
'70.....	51,0	9 $\frac{5}{16}$	8,2	42,1	1,071,	51,520
'69.....	55,2	11 $\frac{1}{16}$	11,3	43,8	940,	45,140
'68.....	52,0	9 $\frac{3}{8}$	11,6	41,0	996,	47,890
'67.....	53,8	10 $\frac{3}{8}$	14,0	41,2	954,	45,890
'66.....	75,8	13 $\frac{1}{2}$	19,5	51,9	800,	42,829

“Wool.

“Prices.—A detailed account of the fluctuations of prices is given partly under the head of the London and Liverpool sales, partly under that of the various descriptions of wool. The highest point for fine wool was reached towards the end of August, when

the article may be said to have occupied an average level. After that the decline was rapid and uninterrupted, leaving prices at the end of the year for Australian wool 10 per cent., for Cape wool 6 per cent., under the quotations of a twelvemonth ago. Of special features may be mentioned the disproportionately high range of prices of superfine wools in the early part of the year, and the entire neglect of the same sorts towards its close; the strong but shortlived rise of scoured wools in August, and the ever increasing neglect of crossbreds, which have gradually dropped to as low a priced level as has been known for the past twenty years. In the following are given quotations in pence per pound for some of the leading descriptions of wool as they stood on the 31st December of the past ten years:—

Kinds.	Value on the 31st December.					
	1878.	1877.	1876.	1875.	1874.	1873.
Australian P.P. good to sup. } combing	21	23½	25	24½	26	28
Ditto, good average grease	11	12½	13½	13	14	15
Ditto, Sydney average clothing	16½	18	19½	19	20	22
Ditto, P.P., sup. washed crossbred.....	18½	20½	25½	25½	28	30
Cape, Eastern, extra sup. s. white....	20½	21	24	24	25½	25
„ average fleece	10½	12	14	14	15½	15
Buenos Ayres, average grease.....	5¾	6¼	7¼	7¼	7½	7
Peru, middling.....	9½	11½	14¼	14¼	14	14
Donskoi, average white carding.....	7½	9¼	10½	11	10½	10
East India, ordinary yellow	7¼	7½	8½	9½	9½	10
Lincoln hogs.....	14	16	19	20	23¼	26
Alpaca, Islay super. fleece	16½	20½	26	30	32	32¾
Mohair, Turkish fair average.....	23	37	38	43	40½	33
Cotton, middling New Orleans	5½	6 ⁹ / ₁₆	6 ¹³ / ₁₆	7 ³ / ₁₆	7¾	8 ⁹ / ₁₆
Wheat, annual average, per quarter	46/6	56/9	46/2	45/2	55/8	58/8
Bank rate, annual average p. cnt.	3 ⁸ / ₁₀	2 ⁹ / ₁₀	2 ⁶ / ₁₀	3 ² / ₁₀	3 ⁷ / ₁₀	4 ⁸ / ₁₀

“Coal and Iron.

“W. Fallows and Co. (Liverpool) report:—

“The review of the iron trade for 1878 is most depressing, as its condition was unsatisfactory beyond all precedent; and it is but a melancholy reflection that we have only suffered in common with other countries, and shared in a depression which appears to have been world-wide. The causes of this condition of things have been fully and ably discussed in the public press, and the conclusion appears to be satisfactorily established that we are experiencing the inevitable reaction which must follow a period of unnatural and inflated trade; and these effects have been aggravated by the unsettled state of political affairs, the serious famines in India and China, together with a general disorganisation of credit in most of the principal countries with which we trade.

“The following figures, gathered from the most reliable sources, will at once reveal the primary cause of the present exceptional condition of the iron trade in the principal countries of the world. The year 1867 is taken as a period of steady quiet trade; 1873 as the maximum point of inflation, whilst the latest returns (1876) are added to show the relative positions under the late depression:—

Production of Pig Iron, 1867-73.

[000's omitted, thus 4,761 = 4,761,000 tons.]

Produce in	1867.	1873.	Increase per Cent. over 1867.	1877.	Since 1873.	
					Decrease per Cent.	Increase per Cent.
Great Britain tons	4,761,	6,566,	38	6,608,	—	—
United States "	1,461,	2,868,	96½	2,314,	19	—
Germany "	987,	2,174,	120	1,566,	28	—
France "	1,229,	1,366,	11	1,522,	—	11
Belgium..... "	423,	607,	43	425,	30	—
	8,861,	13,583,	53	12,437,	77	11

“It will be noticed that whilst the production of some other countries has fallen off considerably between 1873 and 1877, that of the United Kingdom has varied but little. The maximum production was 6,741,000 tons in 1872.”

“Messrs. Bolckow, Vaughan, and Co.’s new steel works have made during the year 75,000 tons of steel rails, and are now in a position to make at the rate of 2,000 tons per week.

“Mr. John Gigers, President of the Cleveland Institution of Engineers, gave the following tables in his opening address of November, 1878:—

Coal. Exports, Home Consumption, and Total Production.

Year.	Exports.	Home Consump- tion.	Total Produce.	Year.	Exports.	Home Consump- tion.	Total Produce.
	Mln. tons.	Mln. tons.	Mln. tons.		Mln. tons.	Mln. tons.	Mln. tons.
1866	10	91	101	1872	13	110	123
'67	10	93	104	'73	12	114	127
'68	11	91	103	'74	14	110	125
'69	11	96	107				
'70	12	98	110	1875	14	117	131
				'76	16	116	133
1871	13	104	117	'77	15	118	134

Production of Pig Iron in the several Countries of the World, 1850-77.

[000's omitted; thus 2,249, = 2,249,000.]

Year.	Great Britain.	United States, America.	Germany.	France.	Belgium.	Austro-Hungary.	Russia.	Sweden.	Luxemburg.	Other Countries.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1850	2,249,	564,	400,	400,	141,	235,	222,	139,	—	135,	4,488,
'55	2,975,	697,	500,	600,	288,	280,	260,	184,	—	144,	5,919,
'60	3,700,	818,	600,	880,	313,	325,	291,	181,	—	140,	7,243,
1865	4,819,	829,	941,	1,179,	461,	370,	310,	222,	26,	140,	9,292,
'70	5,963,	1,659,	1,236,	905,	553,	394,	352,	294,	126,	140,	11,616,
'71	6,627,	1,701,	1,392,	842,	597,	416,	352,	292,	139,	203,	12,565,
1872	6,741,	2,540,	1,771,	1,193,	642,	450,	391,	332,	176,	204,	14,445,
'73	6,566,	2,552,	1,943,	1,339,	595,	523,	376,	338,	252,	204,	14,693,
'74	5,991,	2,393,	1,627,	1,359,	522,	474,	372,	321,	241,	204,	13,407,
1875	6,365,	2,017,	1,743,	1,388,	529,	446,	420,	343,	250,	204,	13,708,
'76	6,555,	1,862,	1,582,	1,420,	559,	470,	420,	345,	250,	204,	13,671,
'77	6,608,	2,059,	1,535,	1,323,	416,	470,	420,	340,	250,	204,	13,627,

Wallsend Coals. Top Prices on London Coal Market, 1845-79.

	s.	d.		s.	d.		s.	d.
1845, Jan.	24	—	1860, Jan.	19	—	1873, Feb.	45	—
'47, "	23	—	'61, "	24	—	'74, Jan.	31	—
'49, "	19	—	'62, "	18	6	'75, "	28	6
'50, "	19	—	'63, "	18	—	'75, July	22	6
'51, "	17	—	'64, "	20	—	'76, Jan.	24	—
'52, "	17	6	'65, "	18	—	'76, July	21	—
'53, "	17	6	'66, "	19	—	'77, Jan.	19	—
'54, " frost	34	—	'67, "	19	—	'77, July	18	—
'55, "	21	—	'68, "	19	6	'78, Jan.	18	—
'56, "	21	—	'69, "	18	6	'78, April	17	—
'57, "	19	6	'70, "	17	—	'78, July	16	6
'58, "	19	6	'71, "	22	—	'78, Oct.	17	6
'59, "	20	—	'72, "	28	—	'79, Jan.	19	—

“The following is our usual table of the circulation and reserves of the leading continental banks, and further evidence on the same subject will be found in Appendix D. The growing magnitude of the reserves of the continental banks has become one of the most important and interesting of the subjects relating to the distribution of the precious metals, and the effects they produce not only as coin circulation passing from hand to hand, but as foundations for banking and credit operations in the form of metallic reserves held by financial institutions:—

Leading Foreign Banks, 1873-78. Notes in Circulation and Bullion Reserve, being Summary of Appendix (passim) in Million £.

[00,000's omitted, thus 111,5 = 111,500,000£.]

Dates.	Bank of France.		Imperial Bank of Germany.		Bank of Austria.		Bank of Belgium.	
	Notes.	Bullion.	Notes.	Bullion.	Notes.	Bullion.	Notes.	Bullion.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
1873.								
1st January.....	111,5	31,7	45,5	27,6	32,5	14,2	11,7	4,7
1st July	115,7	31,0	42,7	35,4	35,5	14,4	14,1	5,6
1874.								
1st January.....	115,8	30,6	44,6	35,2	36,0	14,4	12,6	4,2
1st July	100,9	47,8	42,1	35,5	30,2	14,2	11,8	3,9
1875.								
1st January.....	105,9	52,8	41,9	30,8	30,1	13,9	13,1	4,7
1st July	96,9	62,7	43,3	29,8	29,1	13,8	12,9	4,9
1876.								
1st January	100,4	67,4	35,7	22,2	28,8	13,6	13,5	4,8
1st July	99,2	83,0	38,2	27,1	27,4	13,6	13,1	5,5
1877.								
1st January.....	107,5	86,4	37,9	25,1	29,6	13,6	14,5	4,6
1st July	100,1	90,1	37,1	27,5	27,4	13,6	13,7	4,2
1878.								
1st January	104,1	81,0	35,8	22,6	27,6	13,6	13,1	4,0
1st March	98,2	78,8	31,0	26,2	26,1	13,7	13,2	4,2
1st July	95,5	86,7	33,6	25,5	26,7	13,7	12,5	3,6
1st October.....	95,2	85,8	33,5	23,4	29,7	13,8	11,9	4,0
1st November.....	93,4	82,5	31,9	22,7	32,0	14,6	12,2	3,7
1st December.....	91,8	83,4	29,4	23,8	29,9	14,9	11,9	3,8

Note.—In *France*, through 1873, the market price of *gold* was 2 to 9½, average 7¾ per mille premium. In 1874, bank notes were at *par*; in 1875, the same; in 1876, the same; in 1877 specie payment was resumed.

In *Austria*, in 1873, the premium on gold was 8 per cent.; in 1874 it was 5¼ per cent.; in 1875 it was 3¼ per cent.; in 1876 it was 4½; in 1877 it was 5; and in 1878 it was 2½ to *par* per cent.

In *Italy*, in 1873, the premium on gold was 9 to 15 per cent.; in 1874 it was 11½ per cent.; in 1875 it was 8 per cent.; in 1876 it was 9 per cent.; in 1877 the same; and in 1878 it was 9¼ per cent.

In *Russia*, in 1873, the premium on silver was 12 per cent.; in 1874, it was 13 per cent.; in 1875, it was 15 per cent.; in 1876 it was 20 per cent.; in 1877 it was 39 per cent.; and in 1878 it was 41 per cent.

“It will be observed that in *Austria* the bank notes have reached *par*, and the low price of silver led to large coinage operations at the *Vienna Mint*; but on 2nd January, 1879, they issued a

circular stating that no silver would be received for coining till further notice.

"The following table indicates in forcible figures the extent of the depreciation in 1878 of the shares in seven of the joint stock banks. The lessened market value of the shares of the seven largest of the London joint stock banks is $4\frac{1}{2}$ millions. In the case of the Scotch the fall is no less than $6\frac{1}{3}$ millions. Such a depreciation, and arising from a cause so disgraceful as that of the failure of the City of Glasgow Bank, must be extremely disagreeable and unwelcome to the Scotch banks; who, assuming as something unimpeachable the credit of Scotch banking, have opened expensive offices in London. English investors will scarcely be attracted by the rigid unlimited liability of the Scotch companies; and English customers will scarcely resort to immigrant institutions for facilities which they can procure quite as well from London concerns with which they are familiar:—

London Joint Stock Banks and Scotch Joint Stock Banks, 1878. Highest and Lowest Prices of Shares and Stock, and Amount of Lessened Market Value.

Shares.		Banks.	Prices, 1878.		Fall, 1878.	Lessened Market Value.
Nominal.	Paid.		Highest.	Lowest.		
£	£		£	£	£	£
100	20	{ London and West- minster	67	49	18	1,300,000
50	15	London Joint Stock...	50	38	12	960,000
50	15½	Union	45	33	12	1,030,000
20	10	City	19	11¼	7¾	465,000
						3,755,000
50	15	Imperial, Limited	19	15	4	180,000
25	10	Alliance, "	12¾	9½	3¼	260,000
10	4	Consolidated, Limited	8	6	2	325,000
						4,520,000
		<i>Scotch Banks—</i>				
100	100	Bank of Scotland.....	327	275	52	520,000
"	"	Royal "	237	188	49	980,000
"	"	British Linen	314	244	70	700,000
"	"	Union of Scotland	278	155	123	1,230,000
"	"	National of Scotland	327	260	67	675,000
"	"	Commercial of Scot- land	326	240	86	860,000
"	"	Clydesdale.....	284	150	134	1,340,000
						6,305,000

"We conclude with our usual table of comparative prices as between the end of 1878 and the end of 1877, 1875, 1869, and 1866:—

Wholesale Prices in London. Comparison of 1st January, 1879, with Four Former Dates, stating in Approximate Percentages the Degree in which the Prices at 1st January, 1879, were Higher or Lower than the Prices brought into the Comparison, see Appendix (B).

Articles.	Higher	Lower	Higher	Lower	Higher	Lower	Higher	Lower
	Than 1st January, 1878.		Than 1st January, 1876.		Than 1st January, 1870.		Than 1st January, 1867.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Coffee	—	21	—	22	9	—	—	4
Sugar	—	3	24	—	—	—	26	—
Tea	—	—	11	—	9	—	3	—
Wheat	—	23	—	11	—	6	—	33
Butcher's meat	—	6	—	17	3	—	5	—
Indigo	—	3	26	—	8	—	13	—
Oils	—	4	—	9	—	16	—	24
Timber	—	13	—	10	16	—	21	—
Tallow	—	7	—	31	—	21	—	21
Leather	—	3	—	—	14	—	14	—
Copper	—	11	—	28	—	13	—	26
Iron	—	15	—	40	—	12	—	12
Lead	—	23	—	36	—	23	—	26
Tin	—	9	—	22	—	44	—	22
Cotton	—	21	—	32	—	58	—	68
Flax and hemp	—	23	—	32	—	40	—	39
Silk	—	21	30	—	—	35	—	38
Wool	—	10	—	19	13	—	—	24
Tobacco	—	17	—	40	—	6	—	22
Cotton cloth	—	20	—	27	—	40	—	54
Bank Note circula- tion of Great Britain	15	—	8	—	28	—	30	—

Note.—This table is deduced from the details given in Appendix (B), and is read thus :—The prices of 1st January, 1879, were, as regards coffee, 21 per cent. lower than the prices of 1st of January, 1878; 22 per cent. lower than at 1st January, 1876; 9 per cent. higher than at 1st January, 1870; and 4 per cent. lower than at 1st January, 1867. In some cases it is impossible to arrive satisfactorily at these percentages in consequence of the wideness of the quotations given in the prices current, and also in consequence of changes in classifying the qualities of the articles—changes necessarily incident to improvement of culture and manufacture.

These figures should be carefully studied. The present prices (1st January, 1879) are considerably lower as a rule than at the end of 1870; and still lower as compared with the end of even 1866, after the panic of May in that year. It seems scarcely possible that prices can fall below the present level, and if that be a true inference, cost of production must have at length touched the point of decline at which the profit of extended operations becomes almost certain.

“The exceedingly low level to which prices have fallen at the end of 1878 is very apparent on the face of this table, and by

reference to Appendix B, it will be found that the prices of the following leading commodities are at 1st January, 1879, below even the average prices of the six years 1845-50, the percentage proportions being as follows:—

“Prices lower per cent. on 1st January, 1879, than on the average of the six years 1845-50:—

Sugar	lower	17 pr. cent.	Iron	lower	23 pr. cent.
Wheat	”	25 ”	Lead	”	16 ”
Cotton	”	27 ”	Tin	”	23 ”
Flax	”	29 ”	Cotton Yarn	”	12 ”
Tallow	”	17 ”	” Cloth	”	19 ”
Copper	”	28 ”			

“The commodities which are higher at 1st January, 1879, than during 1845-50, are:—

Coffee	higher	43 pr. cent.	Wool	higher	9 pr. cent.
Tea	”	11 ”	Indigo	”	64 ”
Tobacco	”	56 ”	Oils	”	6 ”
Butcher's meat	”	27 ”	Timber	”	15 ”
Silk	”	13 ”	Leather	”	46 ”

With cost of production reduced, as it must be by a level of prices almost as low as has prevailed in this country at any time during the last fifty years, it seems impossible to avoid the conclusion that a time of revived trade cannot be very distant.”

The following is the Table of “Contents” of the “Commercial History and Review of 1878,” and “Appendix,” from which the foregoing extracts are taken:—

Year 1878.—General Results of its Commercial and Financial History.

I.—Corn and Cattle Trades.

II.—Colonial and Tropical Produce.

III.—Wine Trade.

IV.—Raw Materials.

V.—Shipping and Freights.

VI.—Cotton Trade.

VII.—West Riding, &c., Woollen, Worsted, Flax, Iron, and other Trades.

VIII.—The Money Market in 1877.

APPENDIX.

A.—Wholesale Prices of Commodities in London and Manchester—Average of Six Years 1845-50;—Selected Dates, 1865-77;—and Monthly, 1878.

- B.—Wholesale Prices, 1845-78—Proportionate Results.
- C.—Bank of France.
- D.—Banks of Germany, Belgium, and Austria.
- E.—Foreign Exchanges, 1841-78.
- F.—European Rates of Discount per cent. per annum, 1878.
- G.—Prices of Grain—England and Wales—Calendar Years.
- H.—Joint Stock Banks in London—(Group A)—Entirely Metropolitan.
- I.—The United Discount Companies.
- K.—The Actual Progress of Exports from, and Imports into, United Kingdom, 1856-77 and 1878—Merchandise (Excluding Bullion). According to the Official Returns, When Due Allowance has been made, Freight Charges, Profit, &c., Accruing to United Kingdom.
- L.—Explanations Relative to the Tables of Comparative Prices of Commodities—1845-50, 1851-78—Hitherto Adopted in These “Commercial Reviews;” and an Account of Various Corrections to be introduced.
- M.—Quantity of Gold and Silver Coin in France and Germany in 1878—Extent of German Coinage, &c.—Statement by Professor Soetbeer—The Latin Union.
- N.—The Failure of the City of Glasgow Bank, 1st October, 1878—Issue of the Inspector’s Report, 18th October, 1878.
- O.—Production and Distribution of Gold and Silver, 1850-78—Bank Reserves, 1870-78.
- P.—Strikes and Miscellaneous.
- Q.—Estimate of the Earnings of the Working Classes of the United Kingdom in 1877-78 as compared with 1866, by Professor Leone Levi.
-

II.—*Bankers’ Clearing House Returns.*

WE receive the following from a well-known correspondent:—

A table showing the percentage upon the annual totals passed through the bankers’ clearing house, of clearances on the fourths of the month, on the Stock Exchange account days, and on consols settling days: with the proportion of clearances on all the three special days taken together, compared with the amounts passed on the other days of the month, for the ten years from 1867-68 to 1876-77, and for the two years 1877-79:—

	1867 to 1868.	1868 to 1869.	1869 to 1870.	1870 to 1871.	1871 to 1872.	1872 to 1873.	1873 to 1874.
Amount passed on the fourths of the month....	4'52	4'58	4'53	4'64	4'28	4'43	4'55
Amount passed on the Stock Exchange settling days	13'64	15'58	15'99	15'83	17'58	17'20	16'20
Amount passed on consols settling days	4'06	4'03	4'00	4'21	4'36	4'06	4'34
Total passed on the three special days	22'22	24'19	24'52	24'68	26'22	25'69	25'09
Amount passed on the other days of the month	77'78	75'81	75'48	75'32	73'78	74'31	74'91
	100'00	100'00	100'00	100'00	100'00	100'00	100'00
Percentage of annual in- crease	—	8'49	5'28	8'01	33'38	12'01	—
Percentage of annual decrease	—	—	—	—	—	—	0'16

	1874 to 1875.	1875 to 1876.	1876 to 1877.	Mean of Ten Years.	1877 to 1878.	1878 to 1879.
Amount passed on the fourths of the month....	4'26	4'46	4'75	4'50	4'42	4'35
Amount passed on the Stock Exchangesettling days	17'90	17'80	14'75	16'25	14'72	16'60
Amount passed on consols settling days	4'33	4'48	4'59	4'25	4'61	4'53
Total passed on the three special days	26'49	26'74	24'09	25'00	23'75	25'48
Amount passed on the other days of the month	73'51	73'26	75'91	75'00	76'25	74'52
	100'00	100'00	100'00	100'00	100'00	100'00
Percentage of annual in- crease	0'33	—	—	—	3'97	—
Percentage of annual decrease	—	10'08	9'88	—	—	3'58

III.—*Lloyd's Statistics of Marine Casualties for the Year 1878.*

THE appearance in our present number of the tables relating to marine losses and casualties reported to Lloyd's during the year 1878, affords the opportunity of comparing, both as to numbers and results, the seven years 1872-78 during which these annual analyses have appeared *exclusively* in the *Journal of the Statistical Society*, and for their preservation in a form likely to be of permanent value our Society may justly take the credit.

We give, as usual, a few words of introduction, and append

some comparative tables which may possibly be of interest to those of our readers who are engaged in maritime adventure or marine insurance.

As *life* must always be regarded as of more value than property, we premise tables relating to *lives lost*, *crews saved*, and *crews drowned*:—

Lives Lost, so far as Reported, in both Sailing Vessels and Steamers, in the Seven Years 1872-78 inclusive.

1872.	1873.	1874.	1875.	1876.	1877.	1878.	Average of Seven Years.	Average of previous 12 Years.
1,530	1,975	1,484	1,829	1,679	1,585	2,867	1,850	1,694

The increased loss of life reported in 1878 is to some extent explained by the lamentable collisions of the *Grosser Kurfürst*, German ironclad, in the month of May; the *Princess Alice*, saloon steamer, in September; and the *Pommerania*, German steamer, in November.

We have constantly remarked that the reports relating to *lives lost* are meagre and unsatisfactory, but so far as obtainable the following are interesting:—

Crews Reported Saved.

	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Average of Seven Years.	Average of previous 12 Years.
Sailing vessels	1,198	1,006	975	967	971	1,024	909	1,007	949
Steamers	100	71	95	92	80	91	92	89	65

Crews Reported Drowned.

	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Average of Seven Years.	Average of previous 12 Years.
Sailing vessels	110	207	167	122	113	119	77	131	95
Steamers	13	16	18	11	8	17	13	14	7

The increase in the *proportion of collisions* to the general casualties reported, points to the absolute necessity for the adoption—urged by practical writers for several years—of some signals by which, both in the daytime and at night, *the mind of the man at the wheel might be known*; in other words, the course *actually being steered*, and not merely, as now, the direction which, by the rule of the road, *ought to be taken*.

The proportion of *collisions to general casualties* has been steadily increasing, as the following short table shows:—

	Percentage of Collisions only on Total Casualties.							
	1875.	Average of Nine previous Years.	1876.	Average of Ten previous Years.	1877.	Average of Eleven previous Years.	1878.	Average of Twelve previous Years.
Sailing vessels....	18·69	16·76	20·56	16·95	19·17	17·28	19·41	17·44
Steamers	31·35	30·90	32·05	30·97	29·96	31·10	32·26	30·98

Sailing vessels in collision in 1878 numbered 1,790, being fewer by 104 or 5.49 per cent. than the average of the previous twelve years; but *steamers in collision* were 836, an increase of 248, or 42.18 per cent. over the average of the twelve previous years.

The general casualties reported to sailing vessels in 1878 were 9,221, less by 2,066 than those reported in 1877, or a reduction of 18·30 per cent.; while those reported to steamers were 2,591, an increase of 71 on 1877, equal to 2·82 per cent.

From the *Repertoire Général* we find the number of sea-going vessels, sailing and steam, belonging to different maritime nations in 1878 given as under:—

Sailing vessels.—49,524, measuring 14,317,430 tons, showing a reduction of 2,388 vessels, or 4·60 per cent.; and of 481,700 tons, or 3·26 per cent. from 1877.

Steamers.—5,462 vessels, measuring 5,595,175 tons gross, showing a reduction of nine vessels, or 0·17 per cent., but an increase in gross tonnage of 87,476 tons, or 1·59 per cent. over 1877:—

The more serious casualties give the following percentages upon the annual totals:—

[illegible]

The gradual decrease in the proportion of vessels reported *leaky* we presume is attributable to the increase of iron vessels of high class, which has been most noticeable of late.

The *results* of the casualties reported, so far as ascertained, were as follow :—

Results—Percentage on Annual Total.									
	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Mean of Seven Years.	Mean of Twelve previous Years.
<i>Sg. Vessels—</i>									
Total or constructive loss or great damage	28·09	30·99	29·59	26·43	28·09	28·20	26·88	28·33	31·54
Minor damage	53·15	50·15	51·68	52·22	45·47	49·70	47·44	49·97	46·52
Not damaged or results unknown	18·76	18·86	18·73	21·35	26·44	22·10	25·68	21·70	21·94
	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00
<i>Steamers—</i>									
Total or constructive loss or great damage	14·08	15·28	16·26	12·02	13·65	12·85	12·27	13·77	16·03
Minor damage	50·14	47·64	48·99	48·85	44·88	47·53	44·72	47·54	42·85
Not damaged or results unknown	35·78	37·08	34·75	39·13	41·47	39·62	43·01	38·69	41·12
	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

Missing vessels, or vessels believed to have been lost with all hands, are still below the average, as the following table shows :—

Missing Vessels.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Average of Seven Years.	Average Twelve previous Years.
Sailing vessels	80	148	111	71	58	69	62	86	87
Steamers	9	16	17	11	4	11	11	11	9
Total	89	164	128	82	62	80	73	97	96

Vessels reported *burnt* or *on fire* were as under:—

Burnt or on Fire.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Average of Seven Years.	Average Twelve previous Years.
Sailing vessels	122	153	171	124	132	102	117	132	143
Steamers	59	56	57	58	65	56	64	59	48
Total	181	209	228	182	197	158	181	191	191

The proportion of casualties reported at Lloyd's to the number of sea-going vessels existing as given in the *Repertoire Général* appears as follows:—

	Percentage of Reported Casualties to Sea-going Vessels Existing.							
	1872.	1873.	1874.	1875.	1876.	1877.	1878.	Mean of Seven Years.
Sailing vessels....	20·51	19·77	19·73	18·81	18·45	21·74	18·62	19·66
Steamers	55·32	47·55	46·97	46·12	44·98	46·06	47·44	47·78

In our introduction to Lloyd's statistics last year, reference was made to the importance which would gradually attach to an *Institute of British Underwriters*, and since then the establishment of the *Institute of Bankers* for the reading of papers and the discussion of questions pertaining to finance and the theory and practice of banking, goes far to prove how needful in the opinion of the influential circle of the banking interest it is to have an intelligent centre to which reference can at any time be made.

If this be so, surely British underwriters need some such opportunity for the ventilation and discussion of questions relating to the important engagement of marine insurance, especially in times like the present, when competition and paucity of business are together producing so serious a reduction in premiums as to occasion to many of the oldest and most substantial of both private underwriters and insurance companies serious fears and much anxiety as to the future of underwriting in this country. It is a good omen that many minds are now beginning to appreciate the advantages which would result from the interchange of opinions, and we sincerely trust that ere long it may be our pleasure to announce the establishment, upon a sound and satisfactory basis, of so desirable an Institute as that of British Underwriters.

1.—A Table showing the Number of Wrecks and Casualties to Sailing Vessels and Steamers Compared with the Average Number and

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1878.		Average 12 previous Years.		1878.		Average 12 previous Years.		1878.		Average 12 previous Years.	
	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1. <i>Missing</i>	49	1'18	58	1'17	13	0'26	30	0'50	62	0'67	87	0'81
2. <i>Abandoned</i> —												
Recovered	23	0'55	32	0'64	35	0'69	39	0'66	58	0'63	71	0'65
Lost	92	2'22	118	2'40	114	2'25	132	2'22	206	2'23	250	2'30
Total	115	2'77	150	3'04	149	2'94	171	2'88	264	2'86	321	2'95
3. <i>Collision</i> —												
Not damaged	230	5'54	227	4'59	268	5'29	297	5'03	498	5'40	524	4'83
Damaged	568	13'68	562	11'37	551	10'87	655	11'07	1,119	12'13	1,217	11'21
Sunk	79	1'90	72	1'46	94	1'86	80	1'35	173	1'88	153	1'40
Total	877	21'12	861	17'42	913	18'02	1,032	17'45	1,790	19'41	1,894	17'44
4. <i>Sinking from</i> } <i>causes other than</i> } <i>collision</i>	111	2'67	152	3'08	150	2'96	174	2'94	261	2'83	326	3'00
5. <i>Stranded</i> —												
Got off	688	16'56	709	14'35	694	13'69	780	13'18	1,382	14'99	1,489	13'71
Not got off	338	8'14	488	9'87	374	7'38	646	10'93	712	7'72	1,134	10'45
Subsequent fate } not reported }	58	1'40	121	2'44	124	2'45	167	2'83	182	1'97	288	2'65
Total	1,084	26'10	1,318	26'66	1,192	23'52	1,593	26'94	2,276	24'68	2,912	26'81
6. <i>Capture</i>	—	—	4	0'07	1	0'02	9	0'15	1	0'01	12	0'12
7. <i>Piracy</i>	2	0'05	1	0'03	1	0'02	2	0'03	3	0'03	3	0'03
8. <i>Burnt or on fire</i>	62	1'49	66	1'34	55	1'09	77	1'31	117	1'27	143	1'32
9. <i>Dismasted or</i> } <i>disabled</i>	153	3'68	196	3'96	265	5'23	285	4'82	418	4'53	481	4'43
10. <i>Jettison of</i> } <i>cargo under</i> } <i>deck</i>	86	2'07	92	1'87	109	2'15	89	1'51	195	2'12	181	1'67
11. <i>Jettison of deck-</i> } <i>load or washed</i> } <i>overboard</i>	60	1'44	55	1'11	103	2'03	124	2'10	163	1'77	179	1'65
12. <i>Leaky</i>	361	8'69	518	10'47	541	10'67	659	11'14	902	9'78	1,177	10'83
13. <i>Loss of anchors</i> } <i>or chains</i>	165	3'97	243	4'91	214	4'22	275	4'65	379	4'11	518	4'77
14. <i>Machinery</i> } <i>damaged, &c.</i> }	—	—	—	—	—	—	—	—	—	—	—	—
15. <i>Mutiny, sickness,</i> } <i>casualty to</i> } <i>crew, or refus-</i> } <i>ing duty</i>	93	2'24	121	2'44	111	2'19	119	2'01	204	2'21	239	2'21
16. <i>Ship dmgd., &c.</i>	924	22'25	1,098	22'23	1,241	24'49	1,256	21'24	2,165	23'48	2,355	21'69
17. <i>Water-logged</i> ...	11	0'27	10	0'20	10	0'19	19	0'33	21	0'23	29	0'27
Number of casualties.	4,153	—	4,944	—	5,068	—	5,915	—	9,221	—	10,859	—
Number of vessels	3,910	—	4,597	—	4,726	—	5,529	—	8,636	—	10,126	—

2.—A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with Salvage during the Year 1878, and the respective Percentages thereon, Compared

Sailing Vessels.	First Half-Year.				Second Half-Year.				Annual Total.			
	1878.		Average 12 previous Years.		1878.		Average 12 previous Years.		1878.		Average 12 previous Years.	
	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Number.	Per Cent.	Num- ber.	Per Cent.
<i>Results to Ship—</i>												
Total loss	638	16'32	852	18'52	718	15'19	1,046	18'92	1,356	15'70	1,898	18'75
Constructive loss	72	1'84	88	1'92	79	1'67	79	1'43	151	1'75	167	1'65
Great damage.....	325	8'31	496	10'79	489	10'35	633	11'44	814	9'43	1,128	11'14
Minor damage	1,839	47'03	2,173	47'27	2,258	47'78	2,538	45'90	4,097	47'44	4,711	46'52
Raised aftersink- ing.....	33	0'84	21	0'47	29	0'61	18	0'33	62	0'72	39	0'39
Not damaged or results un- known	1,003	25'65	966	21'02	1,153	24'40	1,215	21'98	2,156	24'96	2,182	21'55
Total	3,910	—	4,597	—	4,726	—	5,529	—	8,636	—	10,126	—
<i>Results to Cargo so far as reported—</i>												
All lost	314	8'03	481	10'47	316	6'69	511	9'24	630	7'30	992	9'80
Part lost	212	5'42	241	5'24	280	5'92	301	5'45	492	5'70	542	5'36
All saved.....	12	0'31	19	0'40	16	0'34	14	0'25	28	0'32	32	0'32
Forwarded	17	0'43	13	0'28	19	0'40	8	0'14	36	0'42	21	0'20
Heated	6	0'15	10	0'21	16	0'34	9	0'15	22	0'25	19	0'18
Shifted	39	1'00	61	1'34	69	1'46	70	1'26	108	1'25	131	1'30
Otherwise damaged	104	2'66	72	1'56	112	2'37	71	1'28	216	2'56	142	1'41
Salvage Services	401	10'26	440	9'58	513	10'85	490	8'87	914	10'58	933	9'22
<i>Lives—</i>												
Crews saved	405	10'36	435	9'47	504	10'66	513	9'29	909	10'41	949	9'37
Crews drowned	56	1'43	50	1'09	21	0'44	44	0'81	77	0'89	95	0'94
Lives lost so far as reported (in both ships and steamers)	2,038	—	853	—	829	—	841	—	2,867	—	1,694	—

Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's List," with the Average Number and Percentages for the Twelve Previous Years.

First Half-Year.				Second Half-Year.				Annual Total.				Steamers.
1878.		Average 12 previous Years.		1878.		Average 12 previous Years.		1878.		Average 12 previous Years.		
Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	Num- ber.	Per Cent.	
77	6.69	66	7.87	89	6.54	83	8.38	166	6.61	149	8.14	<i>Results to Ship—</i>
1	0.09	5	0.57	2	0.15	4	0.38	3	0.12	8	0.46	Total loss
55	4.78	60	7.15	84	6.18	76	7.67	139	5.54	136	7.43	Constructive loss
550	47.79	368	44.00	573	42.13	416	41.88	1,123	44.72	784	42.85	Great damage
9	0.78	6	0.70	13	0.96	8	0.78	22	0.88	14	0.75	Minor damage
459	39.87	332	39.71	599	44.04	406	40.91	1,058	42.13	739	40.37	Raised after sinking
1,151	—	837	—	1,360	—	993	—	2,511	—	1,830	—	{ Not damaged or results unknown
—	—	—	—	—	—	—	—	—	—	—	—	Total
34	2.95	26	3.10	35	2.57	30	3.07	69	2.75	56	3.09	<i>Results to Cargo so far as reported—</i>
63	5.47	35	4.17	82	6.03	40	4.12	145	5.77	76	4.14	All lost
—	—	1	0.18	2	0.15	1	0.10	2	0.08	2	0.14	Part lost
—	—	1	0.13	4	0.29	1	0.07	4	0.16	2	0.10	All saved
3	0.26	1	0.11	2	0.15	1	0.08	5	0.20	2	0.10	Forwarded
20	1.74	10	1.21	23	1.69	16	1.58	43	1.71	26	1.41	Heated
33	2.87	19	2.24	44	3.24	23	2.32	77	3.07	42	2.29	Shifted
120	10.43	67	7.99	127	9.34	70	7.08	247	9.84	136	7.41	Otherwise damaged
—	—	—	—	—	—	—	—	—	—	—	—	<i>Salvage Services</i>
47	4.08	31	3.68	45	3.31	34	3.45	92	3.66	65	3.56	<i>Lives—</i>
8	0.70	5	0.59	5	0.37	2	0.23	13	0.52	7	0.39	Crews saved
—	—	—	—	—	—	—	—	—	—	—	—	Crews drowned
—	—	—	—	—	—	—	—	—	—	—	—	{ Lives lost so far as reported (in both ships and steamers)

3.—A Table showing the Number of Wrecks and Casualties to Sailing Vessels reported
Compared with the Average Number and Percentages

Sailing Vessels.	First Quarter.				Second Quarter.			
	1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. <i>Missing</i>	29	1'26	26	0'83	20	1'08	32	1'77
2. <i>Abandoned—</i>								
Recovered.....	12	0'52	20	0'64	11	0'59	11	0'65
Lost	53	2'30	73	2'30	39	2'11	46	2'57
Total	65	2'82	93	2'94	50	2'70	57	3'22
3. <i>Collision—</i>								
Not damaged	126	5'47	137	4'34	104	5'63	90	5'02
Damaged	276	11'98	357	11'29	292	15'80	205	11'50
Sunk	43	1'86	43	1'37	36	1'95	29	1'64
Total	445	19'31	537	17'00	432	23'38	324	18'16
4. Sinking from causes } other than collision }	48	2'08	86	2'72	63	3'41	66	3'71
5. <i>Stranded—</i>								
Got off	345	14'97	413	13'06	343	18'56	296	16'63
Not got off	204	8'85	311	9'85	134	7'25	176	9'91
Subsequent fate not } reported	27	1'17	81	2'56	31	1'68	40	2'23
Total	576	24'99	805	25'47	508	27'49	513	28'77
6. Capture	—	—	2	0'06	—	—	2	0'10
7. Piracy	1	0'04	1	0'02	1	0'05	—	—
8. Burnt or on fire	39	1'69	36	1'14	23	1'25	30	1'69
9. Dismasted or disabled...	83	3'60	116	3'67	70	3'79	80	4'47
10. Jettison of cargo } under deck	51	2'21	61	1'92	35	1'89	32	1'78
11. Jettison of deckload or } washed overboard.... }	31	1'35	34	1'09	29	1'57	20	1'14
12. Leaky	214	9'28	327	10'34	147	7'96	191	10'70
13. Loss of anchors or } chains	99	4'30	195	6'19	66	3'57	47	2'64
14. Mutiny, sickness, } casualty to crew or } refusing duty	51	2'21	74	2'34	42	2'27	47	2'62
15. Ship damaged, loss of } bulwarks, sails, &c. }	568	24'64	761	24'10	356	19'26	338	18'92
16. Water-logged	5	0'22	5	0'17	6	0'33	5	0'27
Number of casualties	2,305	—	3,160	—	1,848	—	1,784	—
Number of vessels.....	2,154	—	2,911	—	1,756	—	1,687	—

in "*Lloyd's List*," during the Four Quarters of 1878, and the respective Percentages thereon, for the same period of the Twelve Previous Years.

Third Quarter.				Fourth Quarter.				Sailing Vessels.
1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
6	0'33	15	0'80	7	0'22	14	0'35	1. <i>Missing</i>
8	0'43	12	0'61	27	0'83	27	0'68	2. <i>Abandoned—</i>
42	2'29	34	1'77	72	2'23	97	2'45	Recovered
50	2'72	46	2'38	99	3'06	124	3'13	Lost
118	6'43	113	5'85	150	4'64	184	4'63	Total
206	11'22	246	12'74	345	10'67	408	10'26	3. <i>Collision—</i>
44	2'40	31	1'58	50	1'55	50	1'24	Not damaged
368	20'05	390	20'17	545	16'86	642	16'13	Damaged
67	3'65	67	3'48	83	2'57	107	2'69	Sunk
300	16'34	289	14'96	394	12'19	490	12'32	Total
114	6'21	191	9'89	260	8'05	455	11'43	4. <i>Sinking from causes</i>
48	2'61	46	2'36	76	2'35	122	3'06	other than collision
462	25'16	526	27'21	730	22'59	1,067	26'81	5. <i>Stranded—</i>
1	0'05	3	0'17	—	—	6	0'14	Got off
—	—	1	0'07	1	0'03	—	—	Not got off
21	1'14	33	1'73	34	1'05	44	1'10	Subsequent fate not re-
101	5'50	100	5'15	164	5'07	186	4'66	ported
40	2'17	29	1'50	69	2'14	60	1'51	Total
28	1'53	21	1'11	75	2'32	102	2'57	6. Capture
229	12'47	246	12'73	312	9'65	413	10'37	7. Piracy
54	2'94	47	2'42	160	4'95	228	5'74	8. Burnt or on fire
54	2'94	49	2'51	57	1'76	70	1'77	9. Dismasted or disabled
349	19'01	353	18'27	892	27'60	903	22'67	10. Jettison of cargo
6	0'33	6	0'29	4	0'12	14	0'34	under deck
1,836	—	1,933	—	3,232	—	3,982	—	11. Jettison of deckload or
1,742	—	1,839	—	2,984	—	3,690	—	washed overboard
								12. Leaky
								13. Loss of anchors or
								chains
								14. Mutiny, sickness,
								casualty to crew or
								refusing duty
								15. Ship damaged, loss of
								bulwarks, sails, &c.
								16. Water-logged

4.—A Table showing the Number of Wrecks and Casualties to Steamers reported in
Compared with the Average Number and Percentages

Steamers.	First Quarter.				Second Quarter.			
	1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.	
	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.
1. <i>Missing</i>	5	0·74	4	0·87	2	0·39	2	0·45
2. <i>Abandoned</i> —								
Recovered	—	—	—	—	—	—	—	—
Lost	1	0·15	1	0·27	2	0·39	1	0·20
Total	1	0·15	2	0·35	2	0·39	1	0·29
3. <i>Collision</i> —								
Not damaged	96	14·16	75	15·02	98	19·18	59	15·79
Damaged	91	13·42	64	12·72	65	12·72	45	12·21
Sunk	8	1·18	6	1·25	4	0·78	4	1·12
Total	195	28·76	145	28·99	167	32·68	108	29·12
4. Sinking from causes other than collision }	5	0·74	11	2·22	13	2·54	8	2·18
5. <i>Stranded</i> —								
Got off	138	20·35	97	19·39	128	25·05	86	23·16
Not got off	30	4·43	18	3·62	14	2·74	15	3·99
Subsequent fate not reported	1	0·15	7	1·38	2	0·39	4	1·08
Total	169	24·93	122	24·39	144	28·18	105	28·23
6. Capture	—	—	—	—	—	—	—	—
7. Piracy	—	—	—	—	—	—	—	—
8. Burnt or on fire	19	2·80	11	2·17	19	3·72	12	3·23
9. Dismasted or disabled	6	0·88	5	0·97	2	0·39	3	0·72
10. Jettison of cargo under deck	13	1·92	7	1·50	17	3·33	7	1·95
11. Jettison of deckload or washed overboard	3	0·44	5	0·92	3	0·59	2	0·40
12. Leaky	18	2·65	12	2·51	9	1·76	11	2·92
13. Loss of anchors or chains	8	1·18	8	1·57	3	0·59	3	0·76
14. Machinery damaged or short of coals	132	19·47	95	19·00	87	17·03	78	21·02
15. Mutiny, sickness, casualty to crew, or refusing duty	2	0·30	6	1·13	6	1·17	4	1·14
16. Ship damaged, loss of sails, bulwarks, &c. }	102	15·04	67	13·39	37	7·24	28	7·47
17. Water-logged	—	—	—	—	—	—	—	—
Number of casualties	678	—	500	—	511	—	371	—
Number of steamers	657	—	482	—	494	—	355	—

"*Lloyd's List*," during the Four Quarters of 1878, and the respective Percentages thereon, for the same period of the Twelve Previous Years.

Third Quarter.				Fourth Quarter.				Steamers.
1878.		Average Twelve Previous Years.		1878.		Average Twelve Previous Years.		
Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	Number.	Per-centage.	
1	0'18	—	—	3	0'36	2	0'36	1. <i>Missing</i>
—	—	—	—	—	—	—	—	2. <i>Abandoned—</i> Recovered Lost
2	0'36	1	0'15	1	0'12	1	0'20	Total
2	0'36	1	0'17	1	0'12	2	0'25	3. <i>Collision—</i> Not damaged Damaged Sunk
104	18'51	76	19'21	159	18'93	104	16'56	Total
68	12'10	59	14'94	122	14'52	80	12'74	4. Sinking from causes other than collision
8	1'42	7	1'64	13	1'55	8	1'32	
180	32'03	142	35'79	294	35'00	193	30'62	5. <i>Stranded—</i> Got off Not got off
10	1'78	9	2'25	14	1'67	15	2'37	{ Subsequent fate not re- ported
133	23'67	84	21'14	180	21'43	122	19'36	
17	3'02	17	4'27	31	3'69	28	4'47	Total
4	0'71	3	0'76	5	0'59	7	1'06	6. Capture
154	27'40	104	26'17	216	25'71	157	24'89	7. Piracy
—	—	—	—	—	—	1	0'12	8. Burnt or on fire
—	—	—	—	—	—	—	—	9. Dismasted or disabled
13	2'31	12	3'05	13	1'55	13	2'03	{ 10. Jettison of cargo under deck
2	0'36	3	0'76	8	0'95	8	1'32	
16	2'85	6	1'60	17	2'02	7	1'15	{ 11. Jettison of deckload or washed overboard
6	1'07	1	0'34	16	1'91	9	1'43	
8	1'42	8	2'10	7	0'83	16	2'50	12. Leaky
7	1'25	2	0'52	10	1'19	8	1'28	13. Loss of anchors or chains
113	20'10	82	20'62	119	14'17	109	17'36	14. Machinery damaged or short of coals
4	0'71	5	1'28	5	0'59	5	0'78	15. Mutiny, sickness, casualty to crew, or refusing duty
46	8'18	21	5'22	117	13'93	85	13'52	16. Ship damaged, loss of sails, bulwarks, &c.
—	—	—	—	—	—	—	—	17. Water-logged
562	—	396	—	840	—	630	—	Number of casualties
541	—	384	—	819	—	609	—	Number of steamers

5.—*A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with List," during the Four Quarters of 1878, and the respective Percentages thereon, Previous Years.*

	Sailing Vessels.							
	First Quarter.				Second Quarter.			
	1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
<i>Results to Ship—</i>								
Total loss	353	16'39	517	17'77	285	16'23	335	19'87
Constructive loss	43	1'95	51	1'76	30	1'71	37	2'18
Great damage.....	160	7'43	319	10'96	165	9'40	177	10'49
Minor damage	1,070	49'67	1,440	49'48	769	43'79	733	43'45
Raised after sinking	20	0'93	12	0'41	13	0'74	9	0'56
Not damaged or results } unknown.....	509	23'63	571	19'62	494	28'13	395	23'44
Total	2,154	—	2,911	—	1,756	—	1,687	—
<i>Results to Cargo so far as reported—</i>								
All lost	186	8'63	305	10'49	128	7'29	176	10'41
Part lost	124	5'76	152	5'24	88	5'01	87	5'19
All saved.....	10	0'46	12	0'43	2	0'11	6	0'35
Forwarded	11	0'51	8	0'27	6	0'34	5	0'30
Heated	5	0'23	7	0'24	1	0'06	3	0'16
Shifted	20	0'93	43	1'49	19	1'08	18	1'08
Otherwise damaged	58	2'69	43	1'49	46	2'62	28	1'68
Salvage services	214	9'33	294	10'12	187	10'65	146	8'66
<i>Lives—</i>								
Crews saved	218	10'12	274	—	187	10'65	161	9'57
Crews drowned	35	1'62	28	—	21	1'20	22	1'31
Lives lost so far as reported (in both ships and steamers).....	1,233	—	376	—	805	—	477	—

Salvage Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's Compared with the Average Number and Percentages for the same period of the Twelve

Sailing Vessels.								
Third Quarter.				Fourth Quarter.				
1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.		
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	
264	15'16	332	18'08	454	15'21	713	19'34	<i>Results to Ship—</i>
39	2'24	36	1'98	40	1'34	43	1'16	Total loss
201	11'54	212	11'55	288	9'65	420	11'38	Constructive loss
766	43'97	807	43'89	1,492	50'00	1,730	46'90	Great damage
10	0'57	9	0'48	19	0'64	9	0'25	Minor damage
462	26'52	441	24'01	691	23'16	774	20'97	Raised after sinking
								{ Not damaged or results unknown
1,742	—	1,839	—	2,984	—	3,690	—	Total
								<i>Results to Cargo so far as reported—</i>
102	5'86	163	8'89	214	7'17	347	9'41	All lost
99	5'68	85	4'61	181	6'07	216	5'87	Part lost
4	0'23	5	0'29	12	0'40	9	0'24	All saved
8	0'46	4	0'22	11	0'37	4	0'10	Forwarded
9	0'52	4	0'20	7	0'23	5	0'13	Heated
18	1'03	16	0'88	51	1'71	54	1'45	Shifted
58	3'33	31	1'67	54	1'81	39	1'06	Otherwise damaged
212	12'17	156	8'48	301	10'09	334	9'51	Salvage services
								<i>Lives—</i>
187	10'74	158	8'58	317	10'62	355	9'64	Crews saved
9	0'52	13	0'72	12	0'40	31	0'85	Crews drowned
241	—	272	—	588	—	566	—	{ Lives lost so far as reported (in both ships and steamers)

6.—A Table showing the Results of Wrecks and Casualties to Ship and to Cargo, with List," during the Four Quarters of 1878, and the respective Percentages thereon, Previous Years.

	Steamers.							
	First Quarter.				Second Quarter.			
	1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
<i>Results to Ship—</i>								
Total loss	47	7'15	39	8'08	30	6'07	27	7'58
Constructive loss	1	0'15	3	0'59	—	—	2	0'54
Great damage.....	30	4'57	33	6'99	25	5'06	26	7'37
Minor damage	353	53'73	216	44'81	197	39'88	152	42'90
Raised after sinking	4	0'61	3	0'60	5	1'01	3	0'84
Not damaged or results } unknown.....	222	33'79	187	38'93	237	47'98	145	40'77
Total	657	—	482	—	494	—	355	—
<i>Results to Cargo so far as reported—</i>								
All lost	21	3'20	16	3'39	13	2'63	10	2'72
Part lost	31	4'72	18	3'77	32	6'48	17	4'71
All saved.....	—	—	1	0'19	—	—	1	0'16
Forwarded	—	—	1	0'14	—	—	—	—
Heated	1	0'15	1	0'16	2	0'41	—	—
Shifted	16	2'43	8	1'64	4	0'81	2	0'63
Otherwise damaged	15	2'28	11	2'21	18	3'64	8	2'28
Salvage services	56	8'52	35	7'30	64	12'96	32	8'94
<i>Lives—</i>								
Crews saved	28	4'26	18	3'77	19	3'85	13	3'57
Crews drowned	6	0'91	4	0'81	2	0'41	1	0'28
Lives lost so far as re- } ported in both ships } and steamers (see Sail- } ing Vessels, <i>supra</i>) }	—	—	—	—	—	—	—	—

Salvage Services, Crews Saved or Drowned and Lives Lost, so far as reported in "Lloyd's" Compared with the Average Number and Percentages for the same period of the Twelve

Steamers.							
Third Quarter.				Fourth Quarter.			
1878.		Average Twelve previous Years.		1878.		Average Twelve previous Years.	
Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
32	5'91	31	8'19	57	6'96	52	8'50
2	0'37	2	0'46	—	—	2	0'33
33	6'10	31	8'00	51	6'23	45	7'46
227	41'96	156	40'60	346	42'25	260	42'68
6	1'11	3	0'72	7	0'85	5	0'82
241	44'55	161	42'03	358	43'71	245	40'21
541	—	384	—	819	—	609	—
15	2'77	11	2'86	20	2'44	18	3'01
32	5'91	15	3'95	50	6'11	26	4'23
1	0'18	—	—	1	0'11	1	0'11
3	0'55	—	—	1	0'11	—	—
1	0'18	—	—	1	0'11	1	0'10
4	0'74	3	0'69	19	2'32	13	2'11
20	3'70	10	2'49	24	2'93	13	2'22
66	12'20	26	7'31	61	7'45	42	6'94
16	2'96	14	3'66	29	3'54	20	3'31
1	0'18	—	—	4	0'49	2	0'33
—	—	—	—	—	—	—	—

Results to Ship—

Total loss

Constructive loss

Great damage

Minor damage

Raised after sinking

{ Not damaged or results unknown

Total

Results to Cargo so far as reported—

All lost

Part lost

All saved

Forwarded

Heated

Shifted

Otherwise damaged

Salvage services

Lives—

Crews saved

Crews drowned

{ Lives lost so far as reported in both ships and steamers (see Sailing Vessels, *supra*)

IV.—*Statistical Results of the Last Census of the Population of France.**

WE translate the following from the *Journal of the Statistical Society of Paris* for March, 1879:—

The numerical statement of the population per commune, as well as the summary tables for cantons, arrondissements and departments, have been published by the Minister of the Interior, as annexes to the Presidential decree of 30th October, 1877, which makes the figures obtained by the census of 31st December, 1876, authentic for five years, from the 1st January, 1878. In accordance with the usual plan, the Minister of Agriculture and Commerce has been entrusted with the purely statistical part of this census. We propose in this article to reproduce the most striking results of this important work.

We notice that the population of France had increased on the 31st December, 1876, to 36,905,788 persons.

This population, contained in the eighty-six departments and the district of Belfort, is distributed as follows:—

Resident population (normal or municipal)	36,045,198
Population otherwise enumerated (hospitals, colleges, } religious communities, refuges, &c.)	475,514
Total civil population	36,520,712
Army and navy	385,076
Total	36,905,788

The resident population is divided into:—

Urban population	22,223,839
Rural „ „	13,821,359
Total	36,045,198

From which we see that three-fifths of the population is urban, whilst the other two-fifths reside in isolated dwellings.

The census of 1872 having given the population of France as 36,102,921 persons, it follows that the increase in the interval between the two censuses has been 802,807, or 2.22 per cent. (0.49 per annum). The increase in the civil population amounts to 792,502, and in the army to 10,365.

The civil population has been augmented in the majority of departments; although there has been a decrease in nineteen, amongst which are several, like La Manche, Calvados, L'Orne, and L'Eure, which belong to Old Normandy, where the population has gone on decreasing, one might say, for more than two centuries, owing to the existence of a false principle of economy, which checks reproduction at its source.

By the actual movement of the births and deaths, the popula-

* *Résultats Généraux du dénombrement de 1876.* France, Algeria, Colonies.

tion of France on 31st December, 1876, would have amounted to only 36,707,208 persons. The increase by this means has been in fact only 601,287, which leaves a surplus of 201,580 persons of French or foreign extraction who have entered or returned to France after the events of 1870-71, or of Alsace-Lorrainians who have established themselves there since the taking of the census of 1872.

After taking into account the increase in the army, the excess of immigration over emigration is 191,215. There was an excess of immigration in thirty-six departments, and of emigration in fifty-one.

But though the thirty-six favoured departments gained by immigration 379,677, the excess of emigration in the others was only 188,462.

Looking at it in another way, the total excess of immigration is the result of two different movements:—

Excess of immigration into the towns	608,523
„ emigration from the country.....	417,308

According to this, the greater number of towns with an urban population of more than 2,000 have gained, at the expense of the rural population, 417,308 inhabitants, say a little more than 1 per cent. of the total population of France.

As regards the rural population, it will be found that seventy-two departments give an excess of emigration equal altogether to 472,441, whilst fifteen give an excess of immigration amounting to 55,133 persons.

Reciprocally there has been an excess immigration of 658,869 persons in the towns of seventy-two departments, whilst those of fifteen other departments have lost by emigration 50,346.

The departments where the urban population has increased the most are, in descending order, Seine, Seine-et-Oise, Loire, Gironde, Pas-de-Calais, Rhone, Meurthe-et-Moselle. These seven departments alone have absorbed nearly half the total excess gained by the towns of this series. Seine by itself takes a quarter.

Those in which the urban population has decreased in the most marked proportion are Vaucluse, Charente-Inférieure, Gers, Saone-et-Loire, Côtes-du-Nord, Eure. The loss sustained by these departments is equal to three-fourths of the total loss of this series.

Rural emigration, which, as was shown above, has affected seventy-two departments, has taken place principally in Pas-de-Calais, Loire-Inférieure, Seine-Inférieure, Nord, Somme, Ardennes, and Aisne. Of 123,263 inhabitants that the country of these departments has lost, 106,157 have gone to increase the urban population of the same departments, but none the less has there been an actual loss of 17,106 persons, a loss the more remarkable as being sustained by rich and industrious departments.

To sum up; the urban population is constantly increasing, the proportion, which in 1851 was 27·52 per cent., being 32·44 per cent. at the present time.

We will now pass to the more truly statistical results of the

census, *i.e.*, the various aspects under which the population may be considered.

The actual specific population of France (number of inhabitants per square kilometre) is 69·82, or nearly seventy inhabitants per square kilometre. Only twenty-seven departments overstep the mean. Seine, which comes first, is 257 times more densely populated than Basses-Alpes, which comes last. It often occurs that the departments which contain the largest towns are therefore the most densely populated; but departments essentially rural could be named, such as Finistère, Côtes-du-Nord, and Morbihan, which equally show a very dense population.

It is acknowledged that in dealing with a census, by the word *household* is understood that collection of individuals, married or non-married, with or without children, which occupies a separate dwelling. The number of households has risen to 10,088,183, and that of inhabited houses to 7,433,469, from which we find that there are 3·57 inhabitants to a household, and 1·35 households per house; each house contains therefore at least 4·82 resident inhabitants.

In regard to extraction and nationality, the population of France is thus divided:—

French—

Born in the department where they reside.....	30,903,778
„ in other departments	5,165,746
„ abroad (naturalised).....	34,510
Foreigners resident in France	801,754
	<hr/>
	36,905,788

The French population then is composed, as regards more than four-fifths, of persons born in the department where they reside, and for a little less than one-fifth of persons born in other departments or abroad.

The proportion of foreigners is 2·17 per cent. In 1851 the proportion was only 1·06; it rose to 1·33 in 1861, 1·67 in 1866, 2·03 in 1872. The number of foreigners resident in France has then risen at every census.

These foreigners are of every nationality; as a rule the largest number come from neighbouring countries. There are actually in France 374,498 Belgians, 66,526 Germans (of whom 7,498 are Austro-Hungarians), 165,313 Italians, 62,437 Spaniards, 50,203 Swiss, and 30,077 English. It is to be observed with regard to this that, Seine excepted, where foreigners of all nationalities abound, those belonging to the nations we have just named, usually live in the departments bordering on their respective frontiers. It should be remarked, moreover, that the foreign element properly so-called encroaches on the national element in the Nord, Ardennes and Alpes-Maritimes; it is more evenly balanced in Bouches-du-Rhône, and Belfort.

The census of 1876 gives the following as the distribution of the sexes:—

Males	18,373,637 persons, 49·8 per cent.
Females	18,532,149 „ 50·2 „

Or 100·86 females to every 100 males. This excess of the female sex, which is noticeable in all the censuses, would be much greater if the nation was not incessantly augmented from without.

For the aboriginal population (French born in the department) the proportion is in fact 103·56, which decreases to 81·38 in the population born out of the department where they reside.

The following is the composition of the population according to civil status :—

	Males.	Females.	Both Sexes.	Females per 100 Males.
Children :	6,046,339	4,943,867	10,990,206	81·8
Unmarried adults*	3,752,242	3,999,976	7,752,218	106·6
Married.....	7,588,929	7,567,241	15,156,170	99·7
Widowed	986,129	2,021,065	3,007,194	205·0
Total	18,373,639	18,532,149	36,905,788	100·86

* Eighteen years and upwards for males, 15 years and upwards for females.

It will be seen that more boys than girls are born each year. In spite of the excess of mortality which prevails amongst the male sex in the first years of life, the preponderance of boys at a birth is still maintained, though in decreasing limits, up to adult age. The greater longevity of women explains their increased proportion from this age up to the limit of the duration of human existence; but it is above all at advanced ages that women are in the majority; there are also twice as many widows as widowers. As regards the married population, it will be seen that the proportion is nearly the same in both sexes; there is always an excess in favour of the males, which can only be explained by the nature of a population which are always on the move, in which unmarried predominate, and where a certain number of married men may have entered France without their wives and children.

For the civil condition of the two sexes combined the proportion is as follows :—

Children and unmarried:	50·8
Married	41·1
Widowed	8·1
	<hr/> 100·0 <hr/>

Comparing these results with those of prior censuses, we find that since 1806 the proportion of children and unmarried has decreased from 57·5 to 50·8, whilst that of married couples has increased from 35·9 to 41·0, and that of widowed from 6·6 to 8·1. The events of 1870-71 have tended a great deal to this increase in the widowed.

The same events have helped to modify the composition of our population as regards ages. This is shown by the proportion hereinafter given at an interval of ten years :—

Ages.	1866.	1876.
Children (0—15 years).....	26·9	27·1
Adults (15—60 „).....	62·0	61·1
Old people (60 years and upwards)	11·1	11·8

We would point out but one fact with regard to this, and that is the decrease in the proportion of adults and the steady increase in that of old people.

We regret that want of space will not permit of our discussing at length the distribution of the population according to ages, inasmuch as this is of great utility in the majority of statistical researches on population and its movement. We shall confine ourselves to stating, that the mean age of the French population is 31 years 8 months, having been in 1851, 30 years 11 months. Thus our population insensibly ages. We will add, to show the far greater longevity of the female sex, that its mean age is 31 years 9 months, whilst that of the male sex is but 31 years 4 months. These consequences are all logical, and show with what care the figures with regard to age have been obtained, in spite of the difficulties inseparable from such a vast operation.

We will now examine that important part of the census which treats of the distribution of the population according to occupations. The figures prepared by the Government on this head have been manipulated in a way to reply to this twofold question:—

What is the number of individuals of either sex directly engaged in a given quality of occupation, be it as chiefs of establishments, heads of houses, or paid servants, whether clerks, artisans, or journeymen?

What is the number of individuals of each sex (wife or husband, father or mother, relations of all degrees and servants) dependent on the former?

Allowance having been made for the deduction of the population otherwise enumerated, the composition of which we have given above, the population enumerated according to class (*nominative-ment*), is distributed as follows, according to the larger groups of occupations:—

	Population.	Proportional Distribution.
Agriculture.....	18,968,605	53·1
Industry	9,274,537	25·9
Commerce and transport	3,837,223	10·7
Liberal professions	1,531,405	4·3
Persons living exclusively on their incomes	2,151,888	6·0
Totals	35,763,658	100·0
Population not classed	281,740	—
Grand total	36,045,398	—

The conclusion derived from these figures is that more than one half of the population lives by agriculture and its attendant callings. The industrial is equal to a little more than one-fourth of the classified population. One-tenth devotes itself to commerce and its attendants, as credit institutions, the carrying trade, hotel and lodging-house keeping; persons engaged in the liberal professions form a little more than $\frac{4}{100}$, and persons living exclusively on their incomes or revenues $\frac{6}{100}$ of the total.

These comprehensive categories are subdivided into special classes as shown in the following summary:—

	Population.	Per Cent.
<i>Agriculture—</i>		
Landlords and peasants cultivating } their own land	10,620,886	56
Farmers (large and small), and planters....	5,708,132	30
Various agricultural occupations	2,639,587	14
	18,968,605	100
<i>Industry—</i>		
Large industries.....	3,133,867	34
Trades and manufactures.....	6,140,670	66
	9,274,537	100
<i>Commerce and Transport.....</i>	3,837,223	100
<i>Liberal Professions—</i>		
Gendarmerie and police	130,769	8
Religious service	229,667	15
Public offices	567,541	37
Education (public and private)	222,641	15
Law	148,905	10
Medicine.....	141,830	9
Science and arts.....	90,052	6
	1,531,405	100
<i>Persons Living exclusively on their Incomes—</i>		
Owners of property and annuitants	1,957,037	91
State pensioners.....	194,850	9
	2,151,887	100

With regard to the active and non-active elements, meaning by the latter those persons who without being directly the former none the less exist thereby (families and domestic servants), the distribution is as follows:—

Active Population (Forty per Cent.).

Heads of houses, &c.	7,283,035 = 51 per cent.
Clerks and traders	771,668 „ 5 „
Artisans	3,823,760 „ 27 „
Journeyemen	2,504,613 „ 17 „
	14,383,076 „ 100 „

Inactive Population (Sixty per Cent.).

Families	19,040,899	=	89	per cent.
Domestic servants	2,339,683	„	11	„
	<u>21,380,582</u>	„	<u>100</u>	„

In the normal population the active portion is equal to two-fifths, the inactive barely exceeds one-fifth.

In the active population, the heads of houses and chiefs of establishments, professional men who directly make their living without receiving salaries, make up little more than one-half of the total; the other half is composed of the different classes of persons receiving salaries, among whom artisans and journeymen predominate.

It is sufficiently clear that these proportions vary according to the groups of occupations, as for instance the active is the class of population which preponderates in industry; and it is that class which contains proportionally most artisans. Clerks for the most part predominate in commerce, journeymen in agricultural occupations. And lastly the proportion of servants (domestic), as one would expect, is greatest in the category of persons living exclusively on their income.

The table of occupations likewise allows the part played by women in the principal branches of national activity to be defined. We will content ourselves with saying, that in the class of heads of houses, &c., and followers of the liberal professions, there are four times as many men as women; in that of clerks there are three times as many, in that of artisans the difference diminishes, and the surplus of men is only 1.50; finally, there are nearly as many women as men in the class of journeymen.

In families, on the contrary, whatever may be the group under consideration, the proportion of females exceeds twofold that of the other sex. Females predominate, but in a lesser proportion (150 females to every 100 males), in the domestic (servants) class.

V.—*The Movement of Travellers between European Russia and Foreign Countries from 1857 to 1876. [From the Journal de St. Pétersbourg of $\frac{1}{2}$ $\frac{1}{8}$ th December, 1878.]*

THE increase in the construction of railways, and the impetus given to commerce in Russia during the past twenty years, have been especially instrumental in developing the international relations of the empire. The press of foreign countries and Russia has followed from year to year the action of imports and exports, the large increase of postal and telegraphic communications, and the extension of banking enterprise, which together have served to attract European capital to Russia.

One of the elements of this progress, viz., the largely increased

number of travellers into and from Russia and foreign countries, has been less a subject of study.

It will not, we think, be without interest to draw a comparison between the Russia of to-day and the Russia of 1856, and to consider the results realised by the facility of communication, and to inquire into the character of the current of travellers registered at the frontiers.

In studying this subject we will take as a basis the recapitulatory tables which have been added by the Customs Department to the "*Compte rendu du Commerce Extérieur*." These tables are compiled with great care, and will be found most useful in showing results which could only be arrived at by a mass of figures and a number of averages.

In the year 1857, when there were scarcely one thousand versts (663 miles) of railways in working order, the total number of travellers of all nationalities registered at the frontiers and the different Russian ports amounted to 230,767, made up of 113,815 arrivals and 116,952 departures.

In the following year, influenced by modifications in the passport regulations, the numbers were doubled, and reached 485,839—254,448 arrivals and 231,391 departures; in 1859 the numbers increased to 584,409, and in 1860 to 837,851; an increase chiefly owing to departures, which amounted in this year to 498,047. In 1861 and 1862 the numbers fell to 642,140 in the former year, and 585,509 in the latter, a result produced by the great reform of emancipation. The Polish insurrection had the effect of again reducing them in 1863 to 463,018, but in 1864 they again rose to 563,475, and from this year they are on a regularly ascending scale, suffering only a slight variation until 1867 in consequence of the Paris Exhibition; again in 1871, on account of the German invasion of France, and the internal dissensions of that country; and in 1876 on account of the political complications in the East. The following table will show the figures for each year from 1865 to 1876 inclusive:—

	Arrivals.	Departures.	Total.
1865.....	359,335	290,069	649,404
'66.....	394,571	344,672	739,243
'67.....	455,033	400,904	855,937
'68.....	448,636	389,228	837,864
'69.....	443,740	422,912	866,652
'70.....	543,855	529,666	1,073,521
'71.....	500,774	480,087	980,861
'72.....	702,358	645,786	1,348,144
'73.....	790,064	777,268	1,567,332
'74.....	820,661	781,427	1,602,088
'75.....	881,574	838,319	1,719,893
'76.....	860,148	819,799	1,679,947

In order to eliminate, or at least to neutralise to a certain extent the fluctuations produced from year to year by accidental causes, we must place the preceding figures in a quinquennial form:—

	Arrivals.	Departures.	Total.
1857-61	1,331,079	1,449,927	2,781,006
'62-66	1,620,656	1,379,993	3,000,649
67-71	2,392,038	2,222,797	4,614,835
'72-76	4,054,805	3,862,599	7,917,404

Comparing the figures for the two extreme periods, it will be seen that the movement of travellers between Russia and foreign countries has almost trebled itself since 1856; in other words, there is an increase of 5,136,398 arrivals and departures, or of more than 184 per cent. This development of the international relations of the empire, in itself important though it be, is yet the more striking when we consider the effect that the extension of railways had in producing this remarkable progression.

The period of 1862-66 inclusive, during which time 2,382 versts (1,579 miles) of railways were in working order, the number of travellers in excess of the preceding five years was 219,643, or about 8 per cent., and these years, it must be remembered, were affected by the depressing influences to which we have already called attention. In the following period, in which 8,828 versts (5,852 miles) of new lines, or sections of lines were opened, there was an increase of 1,614,186 arrivals and departures, that is to say, more than 53 per cent.; then in the last five years, during which 5,038 versts (3,340 miles) of railways were open, the numbers increased to 3,302,569 exceeding 71 per cent.; these figures will prove the effect of rapid communication.

In studying the question of arrivals as distinct from that of departures, by comparing the figures for 1872-76 with those for 1857-61, we find that the numbers of the former were augmented by 2,723,726 or 204 per cent., whilst the increase in departures was only to the extent of 2,412,672 or 166 per cent. During the whole of these twenty years, 18,313,894 arrivals and departures were registered, of which 5,385,689 or 29 per cent., that is to say about one third, were Russians, and 12,928,025 or 71 per cent. foreigners. This distribution will be more clearly shown by the following tables:—

Russians.

	Arrivals.	Departures.	Excess of Departures.
1857-61	326,606	576,815	250,209
'62-66	264,218	279,979	15,761
'67-71	630,476	665,252	34,776
'72-76	1,244,991	1,397,532	152,541
Total	2,466,291	2,919,578	453,287

Foreigners.

	Arrivals.	Departures.	Excess of Arrivals.
1857-61	1,004,473	873,112	131,361
'62-66	1,356,438	1,100,014	256,424
'67-71	1,761,562	1,557,545	204,017
'72-76	2,809,814	2,465,067	344,747
Total	6,932,287	5,995,738	936,549

A variety of facts may be deduced from the foregoing figures, we see in the first place that the briskness of the circulation was less affected by circumstances, and increased with greater regularity in the case of foreigners than Russians; and if the number of foreigners fluctuated, these fluctuations in themselves were not sufficiently powerful to influence in any marked degree the grand totals. These show about an equal increase in arrivals and departures; and in drawing a comparison between the figures for 1872-76 and 1857-61, we find an increase of 179 per cent. on arrivals, and 182 per cent. on departures. In the case of Russians, for the same years, the proportion is 281 per cent arrivals and 142 per cent. departures; but it must be borne in mind that the latter comparatively small proportion may be attributed to the abnormal increase in the number of departures for the period 1857-61. The constantly increasing number of travellers does not constitute the only element in this study worthy of careful attention, there is yet another of considerable importance, which is the excess in the number of arrivals or departures as the case may be.

When we take a period extending over twenty years, these augmentations which in themselves and in one year alone may be due to some accidental causes, must be attributed either to immigration or emigration, or at least to the fact of a number of persons, by force of circumstances, settling a longer time in the country than they originally intended. Looking at it from this point of view, the number of travellers which we have divided into two categories, Russian and foreign of all nations, show results diametrically opposed; in the case of Russians the departures each year from 1857 to 1876 were generally in excess of the arrivals, and for the twenty years make up a total of 453,287 more departures than arrivals. This excess cannot altogether be attributed to emigration, for it is well known that emigration in the ordinary acceptation of the term is only resorted to on a very small scale in Russia; few Russians in fact quit their country to seek elsewhere the means of existence, and this is accounted for by the fact that not only are they deeply attached to their native land, but the economical conditions under which the masses live, the sparsity of the population, the extent of land over which the people are spread, the laws relating to property and the great expansion given to rural avocations, which up to the present have preserved the country from the plague spots of pauperism and proletarianism, combine to remove all inducements for the Russian to quit his native land.

On the other hand, many Russians are compelled to resort to

western Europe, to seek in warmer and more sunny lands the re-establishment of their health, affected by the severity of the climate, and it is in a great measure due to this cause, and also to the fact of many being attracted by the delights of large towns, and especially of Paris, that there is a falling off in the number of arrivals or rather returns, into Russia.

These deficits are not, however, of any great importance, for the average for the last five years (1872-76) does not exceed 30,508, or 11 per cent. of the average number of departures, which amounts to 279,506.

It must also be borne in mind that in looking at the actual number of arrivals and departures, an absolutely accurate estimate of the number of those really absent cannot be formed, on account of deaths, reliable information on this point being missing; but when we take into consideration the fact that many leaving the country are valetudinarians, or persons in a delicate state of health, the probabilities are that the numbers registered at the Custom House must be subject to large deductions through deaths.

In the case of foreigners, the number of arrivals as compared with departures is in an inverse ratio. Independently of the frequent journeys of business or pleasure to and fro, every year brings an influx of foreigners who come to settle in the country as business or professional men, either merchants, foremen of workshops, artisans, professors of languages, tutors, governesses, and also those unsuccessful persons of all kinds who have failed in establishing any position in their own country. In the four quinquennial periods comprised between 1857 and 1876, this immigration is an established fact, and is composed of people of fourteen different nationalities. The annual average which in 1857-61 was 26,272, amounted in 1872-76 to 68,949, that is to say increased in the proportion of 164 per cent., and it is on about the same regularly ascending scale, as the general movement of arrivals with which it stands in the relationship of 12 to 13 per cent.

In the same manner that the excess of Russian departures over arrivals is affected by deaths, so in a less degree must the mortality among these arrivals serve to reduce these figures; but even after this reservation there yet remains a considerable increase, and its persistence goes far to show the advantages which immigrants find in establishing themselves in Russia.

The countries bordering upon Russia, *i.e.*, Germany, Austria, Roumania, and Turkey, in the point of view of numerical importance, take the first rank in the movement of foreign travellers and immigrants. The German nation alone furnishes half the total number of immigrants, as the following figures will show:—

Germany.

	Arrivals.	Departures.	Excess of Arrivals.
1857-61	682,251	586,057	96,194
'62-66	879,567	750,106	129,461
'67-71	1,122,702	1,007,412	115,290
'72-76	1,921,039	1,704,589	216,450
Total	4,605,559	4,048,164	557,395

The arrivals and departures of Germans which united show an annual average from 1872-76 of 725,125, as compared with 253,662 in the period 1857-61, are increased by 471,463, or about 186 per cent., in fact the numbers are nearly trebled. In the case of immigration, the numbers show an increase of 125 per cent. For the other nationalities next in order of importance, the following table will show the annual averages of arrivals and departures for the two extreme periods:—

	Arrivals, 1857-61.	Departures, 1872-76.	Increase.
Austrians	97,457	268,604	171,147
Roumanians	7,887	22,653	14,766
Turks	4,481	11,307	6,826
French	4,320	6,324	2,004
English	2,908	5,030	2,122
Greeks	1,279	4,085	2,806
Italians	892	3,088	2,196
Swiss	934	2,915	1,981
Americans	301	1,237	936
Belgians	490	1,066	576
Danes	367	955	588
Swedes and Norwegians	182	647	465
Dutch	129	506	377

Comparing these averages, they show an increase of 187 per cent. for Roumanians, 176 per cent. Austrians, 152 per cent. Turks, 246 per cent. Italians, 219 per cent. Greeks, and 212 per cent. Swiss. Although the numbers of Americans, Belgians, Danes, Swedes, and Dutch are of less importance, there is even in these a perceptible increase. The circulation of English and French travellers shows proportionally an increase less marked; in fact, only to the extent of 73 per cent. British and 46 per cent. French subjects. If we now take for the same nationalities the total number of arrivals and departures from 1857-76, which will allow of our distinguishing the numerical importance of each, the result will be as follows:—

	Arrivals.	Departures.	Excess of Arrivals.
Germans	4,605,559	4,048,474	557,395
Austrians	1,903,077	1,736,886	266,191
Turks	94,896	56,585	38,221
Roumanians	153,451	123,288	30,163
French	43,554	31,521	12,033
English	36,655	25,047	11,608
Greeks	29,184	18,756	10,428
Italians	16,379	12,360	4,019
Swiss	15,385	12,345	3,040
Belgians	6,450	5,148	1,302
Americans	7,154	5,949	1,205
Dutch	5,242	4,547	695
Danes	5,244	4,764	480
Swedes and Norwegians	4,291	4,004	287

The part each country takes in the immigration into Russia is clearly shown by the preceding figures. There only remains now to study the proportion of immigrants to the total movement of travellers of the same nationality by comparing the numbers of arrivals and departures. The proportion is highest in the case of Turks, it being 40 per cent.; in other words, more than two-fifths of the Ottoman subjects who have arrived in Russia from 1857-76 came with the express purpose of establishing themselves in the empire, and this is only partly to be attributed to the emigration of the Bulgars from the Dobrudscha. But too much importance must not be attached to this fact, for although in the period 1857-61, during which this emigration took place, there was an excess of 13,041 arrivals, still the numbers for 1867-71 and 1872-76 show a proportional increase, being in excess of arrivals over departures to the extent of 10,494 in the former and 12,714 in the latter period.

After the Turks, the proportion is highest in the case of Greeks, 36 per cent., this is due to the last five years; the figures showing an excess of 4,655 arrivals over departures as compared with 2,654 in 1867-71; 1,279 in 1862-66; and 1,840 in 1857-61. The English come next with a proportion of 31 per cent., a result produced in the same way as in the case of the Greeks, by the last five years, which show a total of 6,724, while the numbers for the three anterior periods fluctuate between 1,236 and 2,074. The proportion of emigration to arrivals is in the ratio of 27 per cent. for French, more than 24 per cent. Italians, 20 per cent. Belgians, above 19 per cent. Roumanians and Swiss, nearly 17 per cent. Americans, 14 per cent. Austrians, 13 per cent. Dutch, 12 per cent. Germans, 9 per cent. Danes, and 6 per cent. Swedes and Norwegians. For the total of foreigners it exceeds 13 per cent. To sum up, the total number of arrivals of foreigners in excess of departures for the twenty years comprised between 1857-76 was 936,549, which brings us to this point, that after making due allowance for deaths, the population of the Russian empire has been increased to this extent by immigration; on the other hand, after deducting the number of departures from Russia, which amounted to 453,287, not accounted for in the returns of re-arrivals, there remains a total of 483,262 persons.

There is one fact worthy of notice in studying the returns published by the customs department, which is that the number of persons leaving and arriving in Russia by sea is almost the same in 1876 as in 1857—21,545 as against 21,401. In the two first quinquennial periods, in spite of circumstances which tended either to reduce or swell the numbers, the flow of travellers by sea has only slightly varied. Comparing the two former and the two latter periods however it will be seen that the numbers have increased from 22,241 to 25,320. In fact, embracing the whole of the twenty years, it represents less than 5 per cent. of the total circulation of travellers, leaving a proportion of 95 per cent. for railways, which it will be seen have almost exclusively benefited by this increase.

VI.—Farmers' and Landowners' Losses.

THE following is taken from the *Statist* of 21st June, 1879 :—

Lord Derby's speech last Saturday to the Lancashire Farmers' Association was wonderfully sensible and consolatory. The times, he said, are undoubtedly bad; there have been three very bad seasons; the bad state of trade generally also diminishes the demand for agricultural produce; and foreign competition helps to make prices unusually low at a time when bad seasons should have made them high. But the farmer, though he cannot look for help in an adjustment of rates, because lower rates in the end mean higher rent, or in similar expedients, has now the whip-hand of the landlord in the adjustment of rents. When two or three landlords are seeking for one tenant, the tenant can make his own terms. Such was the burden of Lord Derby's speech, and it is very soothing and consolatory; but we shall not wonder if the tenants refuse to be consoled. We may agree with Lord Derby that matters will adjust themselves in the end; that some farmers may emigrate, as Lord Derby recommends, and those who may remain will be able to farm on better terms; that seasons, as they can hardly be worse, will be better than they have lately been; and that general trade will also be better. But all this does not alter the fact that farming and landowning in this country are passing through a crisis of unexampled severity. It is of no use comforting people who are being ruined with reflections that things will right themselves in time.

We propose to give a few figures which will bring home to people how terrible is the crisis which affects the tenant-farmer, and, through him, the landowner, who has to make reductions of rent, or, worse still, who has farms thrown on his hands which he can hardly let on any terms. It can be explained very shortly, we think, what the losses of farmers have lately been, and what an enormous proportion they bear both to the gross produce of agriculture in England, as well as to the rental, which is the landowner's concern, and the usual net profits, which are the farmer's concern.

The gross agricultural produce of the United Kingdom, according to Mr. Caird, is 260,737,500*l.*, the items being as follows :—

	Quantity.	Value.
	cwts.	£
Wheat.....	55,000,000	32,187,500
Barley.....	44,000,000	19,800,000
Oats.....	64,000,000	28,800,000
Beans and peas	14,000,000	6,300,000
Total corn	177,000,000	87,087,500
Potatoes	111,000,000	16,650,000
Wool	1,214,000	8,500,000
Butcher's meat, &c.	24,500,000	87,000,000
Cheese and butter	3,000,000	13,500,000
Milk.....		26,000,000
Hay for horses, &c.	80,000,000	16,000,000
Straw sold	40,000,000	6,000,000
Total	436,714,000	260,737,500

And the rental and farmer's profits may each be taken as about one-fourth of this amount, or nearly seventy millions sterling. It is with these figures we have to compare the losses sustained by the farmer at the present time as compared with an average year. How much must these losses amount to? Are they material, or rather are they not overwhelming, in relation to the figures of produce, rent, and profit we have cited?

Let us look at the conditions of the various items separately. The first on the list is wheat, of which the average return is 32,187,000*l.* What can have been the gross value of the wheat crop in recent years, as compared with the average? The answer is that there must be a reduction of at least *something like fifty per cent.* There are three causes of a diminished return. The area under wheat is first of all about 12 per cent. less than it was only a few years ago; next, the yield in the years 1876 and 1877 was no less than 25 per cent. under the average, and last year was probably still under the average, Mr. Caird's estimate that it was over the average being far from generally accepted; last of all, the price obtained by the farmer has been at least 15 per cent. under the average, being 4*6s.* 5*d.* in 1878 as compared with the low average of 5*4s.* only. All these differences come to about 50 per cent., and we shall probably not be far wrong in estimating that from wheat, during the last two or three years, farmers have been receiving about 16,000,000*l.*, instead of the 32,000,000*l.* which Mr. Caird calculates that they receive in average years. Of course, to some extent this reduction is due to the diminution of the area under wheat cultivation, but by the method of comparison we are pursuing we should allow for this in the increased return, if any, from other crops where the area has been enlarged.

As regards the next items on the list—barley, oats, and beans and peas—there seems to have been no material diminution of the area; but we cannot put at less than 10 per cent. the falling-off in price in 1878, and at the present time as compared with the prices ruling a few years ago, while to judge by the rapid increase of foreign importations, far exceeding anything that can be occasioned by the increase of population, the home yield must be taken to have fallen off in quantity another 10 per cent. In other words, the return to farmers from barley, oats, and beans and peas, must be about 20 per cent. under the average, or a loss in all of over 10,000,000*l.*

The next item on the list is potatoes. Here again there is a falling-off of 10 per cent. at least in the price, while the falling-off in aggregate yield, judging by the increased importations, must be another 10 per cent. This makes an additional loss of about 3,330,000*l.*

In wool we may reckon a reduction of about the same amount, or 1,700,000*l.*

As regards "butcher's meat, bacon, hams, and pork," it is more difficult to make an estimate, the falling-off in the price of butcher's meat not having been marked till lately; but we believe we are within the mark in saying that prices of fresh butcher's meat are now at least 10 per cent. lower than they were several years ago,

that prices of bacon, hams, salt beef, &c., are about 25 per cent. lower, and have for a considerable time been 15 to 20 per cent. lower, and that, judging by the increased importations, there has been rather a falling-off in the home supply than otherwise, notwithstanding an increase in permanent pasture, that is, in the area of land devoted to the growth of this sort of agricultural produce. We cannot think, then, we shall be far wrong in estimating that under this head farmers have lately been receiving 20 per cent. less than they formerly did on the average, or a loss of 17,400,000*l.* on an average return of 87,000,000*l.*

In cheese and butter, the next item, the loss must be equally great or greater. The increased importations in the last few years have amounted to 20 per cent. of the former importation, and 10 per cent. of the total consumption at home, so that the home production has probably fallen off a good deal, say at the very least 5 per cent. At the same time the price has fallen tremendously—at the very least, we should say, 25 to 30 per cent. Estimating the reduced return to farmers from butter and cheese at 30 per cent. on a total of 13,500,000*l.*, we get a total loss of 4,050,000*l.*

As to the remaining items, "milk," "hay for horses," and "straw sold for town consumption," we have fewer data to guide us, but we shall only estimate for a loss of 10 per cent., or 4,800,000*l.* as compared with the average.

Summing up all these losses, then, we get the following result:—

	Average Value of Crop.	Reduction.	
		Amount.	Per Cent.
	£	£	
Wheat.....	32,187,500	16,093,750	50
Barley	19,800,000	3,960,000	20
Oats	28,800,000	5,760,000	20
Beans and peas	6,300,000	1,260,000	20
Total corn	87,087,500	27,073,750	
Potatoes	16,650,000	3,330,000	20
Wool	8,500,000	1,700,000	20
Butcher's meat, bacon, &c.	87,000,000	17,400,000	20
Cheese and butter	13,500,000	4,050,000	30
Milk	26,000,000	2,600,000	10
Hay for horses, &c.	16,000,000	1,600,000	10
Straw sold for town consumption ...	6,000,000	600,000	10
Total	260,737,500	58,353,750	

The final result is that while the average gross produce of English agriculture may be put at 260,737,500*l.*, the current yield of the last year or two and at the present time is 58,353,750*l.* less, a difference of rather more than 22 per cent. This is enough to show in a moment how serious the farmer's position must be. His capital being turned over once a-year only, the whole of the loss falls to be deducted from the net profit of the year, and a difference

of 22 per cent. in the gross return must of course be immensely larger on the net return. In fact, as will have been observed, the loss is nearly equal to the whole sum which is reckoned for the income tax as the aggregate farmer's profit!

It will be said, perhaps, that the farmer has some compensation like other consumers in the lower range of prices, but unhappily in his case this is true to a very limited extent only. In particular, he has been unable to obtain any material reduction in the chief element of all which concerns him—the wages of agricultural labour; these wages having in fact just been raised at the very moment that bad seasons and increased foreign competition were about to press so heavily upon him. The farmer is thus without any compensation for the diminished value of his gross produce, and we can at once understand, therefore, why farms are thrown up and rents fall, and there is absolute consternation among farmers and landowners together. Even if a loss to the extent above stated has only been going on for a short time the crisis is all the more severe, because it succeeds several years of minor losses, which have totally deprived all concerned of the means of resisting so great a calamity as has now befallen them.

The extent of the calamity will be farther apparent if we compare the loss with the amount of farming capital in the country. In his paper on "The Accumulations of Capital," Mr. Giffen estimated the farming capital at 667,000,000*l.*; and this was asserted by some gentlemen specially acquainted with farming to be over, and not under, the mark. But the above annual loss of 58,000,000*l.* is about 8 per cent. on this capital sum; and such losses for a year or two would plainly eat into the aggregate capital of the farming class in the most formidable manner. The loss being of a kind which is unequally distributed, the absolute ruin of many farmers, and of not a few landowners who are heavily mortgaged, is only too intelligible. So extreme a fluctuation in any business must spread disaster all round.

Of course, as Lord Derby assumes, matters will right themselves in the end. Farmers will be able to make bargains better adapted to present circumstances than those made several years ago. It is obvious, too, as Lord Derby pointed out, that one of the causes which now press so heavily on the farmers, the badness of the seasons, is of a temporary character only, while the same may be said of general trade. One year with another there will probably in future be better seasons than there have lately been, and the demand for agricultural produce will be increased. But admitting all this, we must also hold that the crisis indicates to some extent a permanent change for the worse in the conditions of English agriculture. The coincidence of very low prices for agricultural produce with singularly unfavourable seasons is altogether unprecedented, and proves in a striking way the *increasing* force of foreign competition. Even if the seasons should be better, therefore, and general trade should improve, farmers and landowners may still suffer from low prices in a way that will prevent a return to the old prosperity. Certainly at the present time no great business could well be in a worse condition or have gloomier prospects than that of the English farmer.

VII.—Notes on Economical and Statistical Works.

Report on the Statistical Survey and Imperial Gazetteer of India, 1878. By W. W. Hunter, LL.D., Director-General of Gazetteers and Statistics to the Government of India.

Dr. Hunter's able report describes the progress made, up to July, 1878, in the compilation of the *Imperial Gazetteer of India*, on which great work he has been engaged ever since 1871. Since the report was sent in to the India Office in July last, further progress has been made, and it is now more than ever certain that the *Gazetteer* will be completed by 1881, the year fixed by the Indian Government for its publication. In 1869 Dr. Hunter was directed to draw up a scheme for a statistical survey of India. The attempt to perform this operation had been made more than once during this and the last century, and much money and time was expended with little or no systematic result. A very great mass of materials was obtained, but the information was of no use, on account of the absence of a well-constituted central organisation, and the want of unity in the principles on which the operations were carried on in the various provinces. The scheme submitted by Dr. Hunter, after a careful investigation of the subject, was accepted by the Governor-General in Council, and its author was appointed Director-General of Statistics in 1871, and instructed to carry it out. The scheme contained two distinct features: first, the collection of materials for forming the statistical survey; and second, the condensation of these materials into a concise alphabetical form to constitute the *Imperial Gazetteer*.

The first section of the report deals with the arrangements for the statistical survey. The aims of Dr. Hunter were—"first, to ascertain and eliminate the causes of previous failures; second, to secure the co-operation of the local governments by respecting their individuality and modifying the general scheme to suit the circumstances of their several provinces; third, to collect the materials at once systematically and cheaply, by enlisting the unpaid agency of the district officers throughout India, directed by a paid central supervision." In 1878 the survey was completed for four-fifths of British India, the returns of 190 out of 240 districts having been received. A table is given, showing the details of the progress made up to 31st May, 1878, since which date the work has been still further advanced. About half of the *Imperial Gazetteer* is now in the printer's hands.

The details relative to the work done in the various administrative divisions of India afford ample evidence of the difficulties encountered by Dr. Hunter in carrying out the plan fixed on. In the case of Bengal, the collection of the materials, under the immediate direction of Dr. Hunter himself, was concluded, and the work of compilation commenced in 1874. It was soon found, however, that the cost of a literary undertaking of that magnitude would be much less in England than in India, and Dr. Hunter was ordered to proceed with all the materials to Edinburgh. This change of plan was entirely successful; the statistical account of

Bengal being completed in half the time and at a third of the cost originally contemplated. Bengal has a population of 62,800,000 persons, or about one-third of the inhabitants of India, and it is certainly fortunate that so large an area was under the direct supervision of Dr. Hunter, for the progress that has been made in Madras and Bombay was much smaller, owing to the want of efficient and uniform superintendence. Not that able men were not employed in the work, but they were constantly removed from their duties in connection with the survey by the Government, and were not always permitted to follow the plan recommended by Dr. Hunter, and carried out by him in Bengal. In Bombay especially the provincial compiler appointed to collect statistics was found to have acquired so much useful information that he was "repeatedly withdrawn from his own work to compile the *Annual Administration Report of the Presidency*." The consequence was that the operations of the statistical survey of Bombay was very much behind hand, and there was some danger of the completion of the *Imperial Gazetteer* being delayed. Dr. Hunter accordingly arranged with the Bombay Government for the supply of statistical abstracts which would serve as materials for the account of Bombay which was required for the *Gazetteer*. Only four complete district returns have been produced in ten years, for the Bombay administration commenced its operations in 1869. Since the appointment of Sir Richard Temple to the governorship of the Presidency more attention has been paid to the matter, and a promise has been given to Dr. Hunter that "the compiler shall remain on his special duty in connection with the statistical account without further interruption."

The backward state of the survey of Madras is due chiefly to another cause, namely, the obstinacy with which the Government of that Presidency has refused to accept the method of collection and compilation devised by Dr. Hunter and adopted by the Indian Government. In spite of remonstrances addressed to them by Dr. Hunter, the Madras authorities preferred the method they had struck out for themselves, and they further seem to have shown themselves very "touchy" when the central Government suggested a change in their system. This rather morbidly independent spirit is evidently the worst obstacle in the way of a satisfactory completion of the *Gazetteer*. Another difficulty, of a more general kind, comes out strongly in the case of Madras. If competent civil servants are appointed to perform the work needed for the statistical survey, they either lose their opportunities of promotion or have to give up their share in the work before they have completed it. The best remedy, we imagine, would be to make it worth the while of able men to finish their portion of the survey, and compensate them for their loss of promotion. This might be expensive, but it would not be as wasteful as the present method, by which much money is spent and no satisfactory result attained.

The accounts of Assam, the north-west provinces, the Punjaub, and the central provinces are all more or less defective, and their completion arrested by one or the other of these causes. Abstracts of the returns have, however, been sent in, and the compilation of

the *Gazetteer* will not be delayed. The information obtained concerning the seven minor administrations is much better and more satisfactory than the returns furnished by the larger and more important seats of Government. The survey of the native territories has made but indifferent progress, and the materials to be supplied on this head for the *Imperial Gazetteer* are still wanting.

The work of compiling the *Gazetteer* itself was commenced in 1877, in pursuance of a despatch from the Secretary of State to the Governor-General of India in Council. It was arranged that Dr. Hunter should return again to England, organise a literary staff there, and complete the work by 1881, "at a cost just one-half of the sum estimated for the compilation if done in India." He took with him one permanent assistant, and organised a staff of contributors, some of whom were paid for their services, and others were volunteers. Dr. Hunter issued full instructions as to the length, form, and nature of the articles the contributors were required to write. The list of places to be noticed in the *Gazetteer* was drawn up with great care, and an index of all places incidentally mentioned was also prepared. Even if all the details were satisfactorily dealt with, however, there are certain defects in a work of this nature which cannot be remedied. As Dr. Hunter remarks, "its administrative value is impaired by the fact that its figures cannot be brought up to date." Moreover, it is almost impossible to contrive that all the statistics given shall relate to the same year, and all that Dr. Hunter claims is that his figures substantially represent the facts between 1872 and 1878. He tells us that as a work of general reference the *Gazetteer* will unfortunately be deficient in archæological and antiquarian details. A certain amount of information will be given regarding the foreign and feudatory States, and general descriptions will be furnished as to the state of things in the independent frontier States. Dr. Hunter has information regarding Afghanistan and others of these latter which there are sound reasons for keeping secret, and which he is not at liberty to divulge, but the proprietors of the *Encyclopædia Britannica* have placed at his disposal all articles on the frontier States of India that were likely to be of use to him.

The remaining difficulties are two, first, that of obtaining the latitude and longitude of the places treated of, and next that of deciding on a system of spelling for the names of the places mentioned. The question of the spelling of Indian names is a very important one, and is very hard to deal with. Obviously some settled plan must be adopted in an alphabetical work. For two systems at least good cases might be made out, and already the public had drawn from both of them indiscriminately in their spelling of the names of various well known places, besides spelling names in many cases without any regard to system at all. Dr. Hunter's own scheme was not adopted *in toto* by the Indian Government. Several pages of the report are taken up with the exposition of his views on this question, and his account of what has actually been decided on, and the steps taken to have the decision made effective. Dr. Hunter concludes his report with a request for an additional six months beyond the period originally contemplated, in order to give time

for the completion of the returns from Bombay and Madras, which, as has been already mentioned, are much behind hand. He also gives in an appendix his circular to the compilers of provincial gazetteers.

Edelmetall-Produktion und Werthverhältniss Zwischen Gold und Silber. Von Dr. Adolf Soetbeer. (*Ergänzungsheft*, No. 5 zu *Petermann's Mittheilungen*). Gotha: Justus Perthes, 1879. Dr. Soetbeer's work on the Production of the Precious Metals is rather lengthy, but it contains a good deal of very valuable information. The period he deals with is from the discovery of America to the present time, or rather to 1875, and he gives a very carefully calculated estimate for each country, of the amounts produced by it at different periods. Since 1493 he calculates that silver to the value of 32,492 million marks, or 1,625½ millions sterling, has been added to the world's stock of this metal. The additions to the stock of gold amount to 1,318½ millions sterling. Besides giving an account of the production of the various nations, he gives tables showing that of the world, in periods of about twenty years each, since 1493. After dealing with the question of the supplies of gold and silver, he traces the history of the relation in value that has subsisted between them, from the earliest times of which we have any information down to 1493. The means of determining the proportion in which silver and gold were exchanged during the middle ages are very scanty. In Germany, from the middle of the fourteenth to the middle of the fifteenth century, it seems to have been pretty steady at about 12 to 1. The anomalous rates which appear to have ruled in England from 1104 to 1278, such as 9 to 1 and 10 to 1, are evidence of the difficulties of transport that then impeded trade. In France the relation varied considerably between 1338 and 1488, silver being, as a rule, worth more, measured in gold, than in Germany, but less than in Italy, where a rate of about 11 to 1 ruled from 1252 to 1375, except that in 1324 the anomalous rate of $13\frac{3}{4}$ to 1 is given. Dr. Soetbeer is, however, doubtful as to the accuracy of the data for this rate, and it is probably erroneous. From 1375 onwards, in Italy, the rate moved to about $10\frac{1}{2}$ to 1, at which it remained, with some strange exceptions, till 1495. Dr. Soetbeer's information regarding the period 1493-1540 is very meagre; but from the latter year onward there is no lack of trustworthy evidence available, as far as Germany, France, and the Netherlands are concerned. The rate fluctuated a good deal in those countries from 1501 to 1680, the tendency being, on the whole, one of depreciation for silver. From 1687 to 1878 the rate is given for every year, and the resulting table is a very instructive one. During the period 1687-1740 the rate oscillated about 15·09 to 1. From about 1741, however, silver once more rose in comparison with gold, and down to about 1789 the average rate was about 14·75 to 1. Subsequently gold being much appreciated the rate moved to 15·42 to 1, at which it remained tolerably steady, allowing for some rather severe fluctuations during the Napoleonic wars, until about 1820, since which year until 1850, 15·75 to 1 was the most usual rate. The gold discoveries of 1851 had the effect of depreciating gold to such an extent, that the rate during the twenty years ending with

1870 was once more about 15·40 to 1, or more favourable to silver than the "bi-metallic" rate of 15·50 to 1. Since 1870, the monetary policy of Germany has introduced a new set of conditions, and the rate has rapidly advanced. In 1871 it was 15·57 to 1, and in 1878 17·92 to 1. We may remark that the average rate of 15·98 to 1, given as representing the five years 1871-75 is somewhat misleading, as the movement during that period was one of steady decline in silver, and the difference between the maximum and minimum rates is no less than a whole unit. In most previous periods the differences of the maxima and minima were slight enough to permit of the arithmetic mean being treated as really typical. We must not omit to mention Dr. Soetbeer's diagrams. Although they show no facts which are not easily perceived from the tables, they are so well executed that they deserve high praise. Diagram III, showing the variations in the rate of exchange between silver and gold, is especially fine as a specimen of the employment of the graphic method.

VIII.—Notes on Recent Additions to the Library.

THE additions to the library during the past quarter, are as usual both numerous and valuable.

We may draw attention to the various foreign Government publications that enrich our library, to which the list that is inserted quarterly in the *Journal*, will from time to time be a tolerable guide. In most cases our series of such works are complete, and they are easily accessible to any Fellows of the Society who may wish to consult them.

M. François Mosser, the author of *L'Esprit de l'Economie Politique*, is evidently a man of some originality of mind. Unfortunately there are cases in which to be original and to be useless are synonymous terms. The main principles of political economy are now settled, and in any case, we fear that an attempt to apply Hegelian phraseology to economics, which is what M. Mosser has attempted to do, was doomed at the outset to failure. We are sorry to say that the book is hardly readable at all, in consequence of the monstrous jargon in which the author has thought fit to express his ideas. His views, as far as we can see, for we must plead guilty to having only read a portion of this novel development of the principles of the Ding au Sich school, seem very sound. He shows a true appreciation of the pretensions of the historic school, which he truly describes as a mere reaction from the extreme length to which the followers of the deductive method had been led away. At the same time he is not blind to the defects, or rather the impotences, of pure deduction. If M. Mosser will only condescend to use the language of ordinary mortals, to abstain from writing such sentences as this, "*l'economie politique n'a aujourd'hui encore que le sentiment du Vrai qui la pousse à l'activité;*" and from such phrases as, "*la négation du travail comme pure quantité,*" we have

no doubt he could write an excellent volume on political economy. Unless he "reforms this altogether," his readers are likely to be very few indeed.

The *Report of the Special Committee of the Liverpool Chamber of Commerce*, appointed to consider the "state of trade in connection with the discrediting of silver as money," is a very curious document. It sets forth that the committee, having investigated the subject with a profound sense of its importance, have arrived at the conclusion that the present depression of trade is due to the demonetisation of silver, and that in order to remedy the evils thus produced, all nations must adopt bi-metallism. That clever and well instructed men of business should have deliberately advocated such an impracticable chimera as universal bi-metallism, only shows how little our educational system has hitherto been able to effect of a useful kind. While however the country still contains gentlemen who have, presumably, once learnt the elements of political economy, and who nevertheless talk nonsense about "reciprocity," it is not surprising that the more refined absurdity involved in bi-metallism should find adherents. After all, bi-metallism is conceivable in theory, however impossible it may be in practice, while the terms "protection" or "reciprocity" cannot even be construed in thought. It is not likely that bi-metallism will ever receive more able advocacy than that given to it by the Liverpool Chamber of Commerce, and if we find that that body has shown itself to be under a grave misconception of the economic phenomena investigated, our disbelief in the theories it puts forward will be much increased. The committee are of opinion that, up to 1875, the action of the Latin Union tended to produce a "par of exchange" between gold and silver. Now it has been admitted on all hands, that the machinery of the Latin Union *does* exert some kind of "equilibratory" force on the value of the two metals. When silver was cheap, France and the Latin Union took silver, and when that metal rose relatively to gold, or what comes to the same thing, gold fell relatively to it, they once more returned silver to the world at large. But the whole force of the bi-metallic machinery lies in the fact that a bi-metallic country gives gold for silver, or silver for gold, at the option of those with whom it deals. When silver was cheaper than gold, *e.g.*, from 1820 to 1850, the bi-metallic law caused silver to flow into France; as long as France had gold, her readiness to take silver acted to keep the silver market up, just as any other demand for silver does. But when gold became scarce in France, the bi-metallic law rapidly ceased to exercise any control over the price of silver, until the time of the gold discoveries, when France once more obtained gold. As however the fall in gold produced a rise in silver, apart from the causes tending to harden the silver market itself, the action of the bi-metallic law subsequent to 1850 was to depress, not to raise the value of silver. That previous to 1850 the market price of silver was always below the bi-metallic price, proves that the steadiness of silver was due to natural causes. For except during the earlier portion of the period in question, the bi-metallic law had, as we have shown, no influence over the price. Even supposing there were no flaw in the theory of bi-metallism, its

practical realisation is absolutely impossible. It would be very difficult to persuade even the nations of Europe to agree on the subject. And to induce the enormous populations resident in China and other silver countries to take to gold, would be a hopeless task.

Tenth Annual Report of the Massachusetts Bureau of Statistics of Labour. January, 1879. Trübner and Co. The latest report issued by the Massachusetts Bureau of Statistics of Labour, is a very interesting one. Of the various matters dealt with, some are of a merely local importance. On the other hand, the inquiry as to the number of unemployed persons in Massachusetts in 1878, that into the state of wages and prices in 1878 as compared with 1860, and the result of an attempt to obtain the opinion of workmen themselves on the Labour Question, are of a more general value. For Massachusetts may fairly be taken as a representative of the best results of civilisation in the Eastern States of the Union. With regard to the number of unemployed persons, the Bureau instituted a thorough canvass of the State in June and July, 1878. The results obtained indicated a condition of things so essentially different from the generally received statements, "that it was resolved to make known the facts at once." The number of persons out of work in June and July, 1878, was 28,508. Considering that statements had been made, some asserting that the number was from 200,000 to 300,000, that there were 40,000 out of work in Boston alone, the actual result shows how utterly erroneous estimates of such statistical quantities may be, especially when put forward by people who are passionately attached to some preconceived opinion. The pessimists in America were naturally very angry at having one of their pet allegations demolished in this unceremonious manner, and accordingly they asserted that June was not a fair month to take. The Bureau accordingly made another canvass in November, 1878, with the result of showing that at that date only 23,000 persons were out of work. The investigation of wages and prices in 1878 and 1860 occupies many pages in the report. It is shown in the tables that on the whole wages were 24·4 per cent. higher in 1878 than in 1860. On the other hand, the prices of such articles as enter into the cost of living have increased about 14·5 per cent. The advance in "real wages" is therefore about 10 per cent. In estimating the improvement in the condition of the workmen, it should be remembered that certain reductions in the hours of labour have been effected. Some most interesting information as to the habits of the working classes in the matter of purchases of what they need, is given, which seems to show that in Massachusetts they continue to use the best qualities of food but in lesser quantities, and are practising rigid economy in boots, clothing, fuel, and other things. The attempt made by the Bureau to obtain a large mass of "opinions and suggestions" from workmen, as to their condition, failed, owing to the utter want of interest displayed by the workmen appealed to. Five thousand notices were sent out to all parts of the State, and in addition, the newspapers inserted advertisements. In answer to this appeal, 638 requests for blank forms to be filled up were received. Neither signatures, nor addresses were asked for, so that no fear of consequences should

trouble even the most outspoken complaints. Of the 638 forms sent out, only 272 were returned, and of these 22 were useless, through imperfect filling up, and 20 were left blank. The result was very disappointing, and could not be treated as of much statistical value. It supplies, however, very remarkable negative evidence of the want of interest of the working classes, even in so highly intelligent a population as that of Massachusetts, in the labour question.

American Almanac and Treasury of Facts, Statistical, Financial, and Political, for 1879, edited by A. R. Spofford, Librarian of Congress, is a duodecimo volume of 400 pages, in its second year of issue, and gives in a compact form, all the most important facts relating to American agriculture, manufactures, mining, shipping, railroads, telegraphs, banks, post offices, public funds, education, currency, revenue and expenditure, taxation, imports and exports, public debts, investments, &c., and also a separate view of each State of the Union.

The first issue (for 1878), which is also to be found in the library, was devoted largely to financial topics. The present issue (for 1879) gives prominence to the great industries and commerce of the United States, and is described as substantially a new work. Among its new features is a series of articles on the History and Principles of Taxation, Homestead and Exemption Laws in all the States, a History of the Continental and Confederate Currency, the Budgets of Nations, the World's Stock of the Precious Metals, the Insolvent Laws of all the States, Sugar Production, Silver Money and the Paris Conference, History of Resumption in England, Vital Statistics of various Nations, Cotton Production of the United States, the Army and Navy, &c.

We hope this work will receive the support necessary to ensure its continuance, as we are told that the edition for 1878 did not meet its expenses, and that whether the work will be continued hereafter must depend upon the encouragement received. The editor's official position is not only a guarantee of his ability for the task he has undertaken, but also of the trustworthy character of his sources of information for such a work, which are in almost all cases quoted, a commendable practice, that adds considerably to the value of the book.

The Colonial Office List for 1879, published by Messrs. Harrison and Sons, is an 8vo. volume of 400 pages, comprising historical and statistical information respecting the colonial dependencies of Great Britain, &c., compiled from official records by the permission of the Secretary of State for the Colonies. The present is the eighteenth annual publication, the contents of which are divided into eight parts, the most interesting and important portion of the book, however, is the Historical and Statistical Account of the Colonies (Part II), appended to which in some cases are well-executed coloured maps, of which the present volume contains fifteen, besides a general map of the world showing the British dominions, ocean telegraphs, &c. The information relating to each colony has been ably compressed and clearly stated, while it may be assumed, considering the facilities of access to official records that the compiler enjoys, that the latest available information is given.

Since last year three new maps have been added to the series, viz., for the Bahamas, Natal and the Transvaal. The latter is interesting, and up to date showing clearly the additions claimed for the Transvaal by the local geographer, Mr. Jeppe, as well as the territory awarded to the Zulus by Her Majesty's High Commissioner in the recent arbitration between the Transvaal and the Zulu nation.

Additions to the Library during the Quarter ended 30th June, 1879.

Donations.	By whom Presented.
Austria and Hungary—	
Statistisches Jahrbuch für 1876, Heft 7; und für 1877, Heft 9. 8vo. Wien, 1879	The Imperial Statistical Central Commission
Hivatalos Statistikai Közlemények Magyarország Hite- litézetei, 1877-ben. 171 pp., imp. 8vo. Budapest, 1879	
Statistisches Jahrbuch für Ungarn, 1876, 6 ^{er} Jahrgang, Hefte 1, 3, und 6. 4to. Budapest, 1879	"
Die Wirthschaftliche und Commercielle Beschreibung der Königl.-Ungarischen Staatsforste. 211 pp., map, 4to. Budapest, 1878	
BUDAPEST.—Budapest Főváros Statisztikai Hivatala k havi füzetei, VI Évfolyam 1878, 56-67 szam. 8vo. 1879	M. J. Körösi
BUDAPEST.—Neuvième Session du Congrès International de Statistique, 1876	
Programme. Avant Propos	Mrs. N. Tayler
" II Section, Justice	
" " " Article 3. Statistique des Personnes Morales s'occupant d'Industrie et de Commerce.....	
" III " Hygiène Publique	
" IV " Agriculture et Sylviculture	
" V " Industrie, commerce, &c.	
" " " Article 2. Statistique des Accidents et des Décès dans l'industrie, provenant du fait même du travail et Assurance contre les Accidents.....	
Rapports et Résolutions	
Compte-Rendu, 2 ^{eme} Partie. 4to. Budapest.....	
Eloge de L. A. J. Quetelet. Discours prononcé par M. E. Engel. 4to. Budapest and Berlin, 1876....	
Statistique Internationale—	
Caisses d'Epargne, compilée par le Bureau de Statistique du Royaume d'Italie. Imp. 8vo. Rome, 1876	
Etat de la Population. I. Tableaux recueillis par le Bureau Central de Statistique de la Suède. 123 pp., 4to. Stockholm, 1875-76	
VIENNA. Commission du Congrès International de Statistique. Compte-Rendu des Séances tenues à Vienne en 1873. 42 pp., 8vo. St. Pétersbourg, 1874)	

Donations—Contd.

Donations.	By whom Presented.
Belgium—	
Annuaire Statistique de la Belgique. 9 ^{eme} année, 1878. xlii and 372 pp., diagrams, 8vo. Bruxelles, 1879	The Ministry of the Interior
Exposé de la situation du Royaume de 1861 à 1875. 2 ^e et 3 ^e Fascicule. 8vo. Bruxelles.....	
BRUSSELS. Annuaire de la Mortalité, ou Tableaux Statistiques des Causes de Décès et du Mouvement de la Population. Par le Dr. E. Janssens. 1876. 15 ^{eme} année. Diagrams, &c., 8vo. Bruxelles, 1877	Dr. E. Janssens
Brazil. Quelques renseignements statistiques sur le Brésil, par le délégué au congrès de Bude-Pesth, Vicomte de Porto Seguro. 23 pp., imp. 8vo. Vienne, 1876	Mrs. N. Tayler
China—	
<i>Imperial Maritime Customs—</i>	
1. <i>Statistical Series.</i> Reports on Trade at the Treaty Ports for the year 1877. 13th issue. Maps and diagrams. 4to. Shanghai, 1878	R. Hart, Esq., Inspector General of Chinese Maritime Customs
2. <i>Special Series:</i> No. 2. Medical Reports for the half-year ended 30th September, 1878. 16th issue, vi and 32 pp., plates and diagrams, 4to.....	
3. <i>Miscellaneous Series;</i> No. 6. List of the Chinese Lighthouses, Light-vessels, Buoys and Beacons for 1879. (Corrected to 1st December, 1878.) 7th issue, 22 pp., 4to. Shanghai, 1879	
Denmark—	
<i>Statistisk Tabelværk, 4^e Række—</i>	
Litra A. N ^o 1. Vielser, Fødsler og Dødsfald i aarene 1870-74 (mariages, naissances et décès). x and 247 pp., 4to. Kjöbenhavn, 1879	The Statistical Bureau of Denmark
Rapport au Congrès International de Statistique de Bude-Pesth sur l'état de la Statistique Officielle du Royaume de Danemark. 8vo. Copenhagen, 1876	
France—	
Statistique de l'Enseignement Primaire (1876-77). Tome Premier. lxxxii and 264 pp., maps and diagrams, 4to. Paris, 1878	The Ministry of Public Education, &c.
Ditto, Report without the Tables. lxxxii pp., maps and diagrams, 4to.....	
Ministère des Finances. Bulletin de Statistique et de législation comparée, 3 ^{eme} année, Mar.—May, 1879. 8vo. Paris	M. A. de Foville
Lyon, Mémoires et Comptes-Rendus de la Société des Sciences Médicales de, tome xvii, 1877. Plate, 8vo. Lyon—Paris, 1878	The Society
<i>Révue Bibliographique Universelle—</i>	
Partie Littéraire, tome xxv, Nos. 4—5	The Editor
„ Technique. Tome xxvii, Nos. 4—5. 8vo. Paris, 1879.	

Donations—Contd.

Donations.	By whom Presented.
France—Contd.	
Révue Géographique Internationale— 4 ^{me} année, No. 41. 4to. Paris, 1879	The Editor
Société de Statistique de Paris, Journal de la, xx ^{eme} année. Nos. 4—6, imp. 8vo. Paris, 1879	The Society
Germany—	
Monatshefte zur Statistik des Deutschen Reichs. Band xxxvii, Hefte 1—3 (Jan.—Mar., 1879). 4to. Berlin	The Imperial Statis- tical Office
BERLIN. Statistisches Jahrbuch der Stadt, 5 ^{er} Jahr- gang, herausgegeben von R. Böckh. 240 pp., 8vo. Berlin, 1879	
FRANKFORT. Beiträge zur Statistik der Stadt Frank- furt-am-Main. 3 ^{er} Band, 3 ^{es} Heft, 165 pp., 4to. 1879	The Editor
Ditto, Statistische Mittheilungen über den civilstand der Stadt Frankfurt - am - Main im Jahre 1878. 19 pp., 4to. 1879	
PRUSSIA. Preussische Statistik— 48. Die Bewegung der Bevölkerung im Preussischen Staate während des Jahres 1877	The Geographical and Statistical Society, Frankfort
48A. Rückblick auf die Bewegung der Bewölkerung im Preussischen Staate während des Zeitraumes vom Jahre 1816-74. 4to. Berlin, 1879.....	
Zeitschrift des Königlich Preussischen Statistischen Bureaus. 18 ^{er} Jahrgang, 1878. Hefte 3 und 4 (Juli—Dec.), 4to. Berlin.....	„
SAXONY. Zeitschrift des K. Sächsischen Statistischen Bureaus. xxiv Jahrgang, 1878. Hefte 1 und 2, 94 pp., 4to. Dresden.....	The Royal Statis- tical Bureau of Saxony
Italy—	
Atti Parlamentari. Sessione del 1878-79. Camera dei Deputati, N. 190. Progetto di Legge. Riforma della legge Elettorale Politica del 17 Dicembre, 1860. 317 pp., 4to.	The Directorate General of Statis- tics
Bilanci Provinciali. Anno XVII, 1878. xiv and 35 pp., imp. 8vo. Roma, 1879	
Bollettino Settimanale dei Prezzi di Alcuni dei princi- pali Prodotti Agrari. Anno 1879. Nos. 7—15, imp. 8vo. Roma.....	„
Bollettino mensile delle Situazioni dei Conti degli Istituti d'Emissione. Anno X, Nos. 1 e 2, imp. 8vo. Roma	„
Bollettino Bimestrale delle Situazioni dei Conti. Anno IX, No. 6, imp. 8vo. Roma	„
Bollettino Bimestrale del Risparmio. Anno IV, No. 1, imp. 8vo. Roma.....	„
Bollettino di Notizie Commerciali, 1878. Nos. 15, 16, 18, imp. 8vo. Roma	„
Bollettino Consolare. Vol. xv, fasc. 1, 2, 4. 8vo. Roma	„
Ministero della Guerra. Della Leva sui giovani nati nell' anno 1857 e delle vicende del R. Esercito dal 1° Ott, 1877—30 Sett, 1878	„

Donations.	By whom Presented.
Italy—Contd.	
Navigazione Italiana, Movimento della nei Porti Esteri } Anno XV, 1876. xliii and 214 pp., imp. 8vo. } Roma, 1878 }	The Directorate General of Statis- tics
Navigazione nei Porti del Regno. Parte 2 ^a , anno } 1877, L and 102 pp., map, imp. 8vo. Roma, } 1878 }	"
Popolazione, Movimento dello stato civile. Anno XVI, } 1877. Parte 2 ^a , 261 pp., imp. 8vo. Roma, 1878 }	"
Relazione Statistica sui Telegrafi del Regno d' Italia } nell' anno 1877, 180 pp., carta, &c., imp. 8vo. } Roma, 1879 }	"
Scalia (Martino B.), La Riforma Penitenziaria in } Italia. Studi e Proposte. 368 pp., map, 8vo. Roma, } 1879 }	"
Società Italiana d'Igiene, Giornale della, anno 1 ^o , } No. 2 (Mar.—Apr., 1879). Diagrams. 8vo. Milano }	The Society
Rapport sur les casiers judiciaires et sur la récidive en } Italie. 53 pp., imp. 8vo. Rome, 1876 }	Mrs. N. Tayler
Rivista Europea, Rivista Internazionale. Vol. xii, } fasc. 3 e 4, e vol. xiii, fasc. 1 e 2. Imp. 8vo. } Firenze }	The Editor
Sweden and Norway—	
NORWAY—Officielle Statistik—	
A. No. 2. Fattigstatistik for 1876. (Assistance } publique) }	
B. „ 1. Criminalstatistiske Tabeller for aaret } 1876. (Statistique Criminelle)..... }	
C. „ 1. Tabeller vedkommende Folkemængdens } Bevægelse i aaret 1874. Tilgemed nogle } Hovedopgaver for aarene 1875-78. } (Mouvement de la population) }	
„ „ 3a. Tabeller vedkommende Norges Handel } i aaret 1877. (Commerce)..... }	The Central Statisti- cal Bureau of Nor- way
„ „ 9. Statistik over Norges Fiskerier i aaret } 1876. (Pêche)..... }	
„ „ 10. Statistik over Norges Kommunale Fi- } nantser i aaret 1875. (Finances des } communes) }	
E. „ 1. Tjenstdygtighedsforhold ved armeens } Rekrutering i 1878. (Recrutement } de l'armée). 4to. Christiania..... }	
Le Royaume de Norvège et le Peuple Norvégien, } rapport à l'Exposition Universelle de 1878 à Paris, } par le Dr. O. J. Broch. 509 and 96 pp., maps, } 8vo. Christiania, 1878 }	The Royal University of Christiania
SWEDEN—Officiela Statistik—	
M. Postverket 14 år 1877. Serien A (Postes) } „ „ B }	The Central Sta- tistical Bureau of Sweden
Q. Skogsväsendet, ix, for år 1877 (Forêts)	
U. Kommunernas Fattigvård och Finanser III, } for år 1876. (Assistance Publique.) 4to.... }	

Donations—Contd.

Donations.	By whom Presented.
SWEDEN—Contd.	
Uppgift å rikets in- och Ut-försel af vissa hufvudsakliga varor under Jan.—Dec., 1874-78, och Jan.—Mars, 1875-79, månader nedannämnda år. 4to. Stockholm	The Central Statistical Bureau of Sweden
Statistisk Tidskrift, utgifven af Kungl. Statistiska Central Bryan—	
1878, H. 53, No. 3	"
1879, H. 55-6, Nos. 1, 2, diagrams. 8vo. Stockholm	
STOCKHOLM. Commission Permanente du Congrès International de Statistique. Compte-Rendu des conférences de Stockholm en 1874. 128 pp., imp. 8vo. St. Pétersbourg, 1874	Mrs. N. Tayler
Portugal—	
<i>Société de Géographie de Lisbonne—</i>	
Lettre de M. le Major Serpa Pinto, l'explorateur Portugais, à M. le Ministre de la Marine et des Colonies, datée de Lialui (Haut-Zambèze) du 3 Septembre, 1878. 1 sheet, 4to	The Society
Boletim da Sociedade de Geographia de Lisboa. No. 4. Dez. 1878. 8vo. Porto, 1879	
Investigações Geographicas dos Portuguezes pelo Professor E. Milne Edwards. Tradução de Professor R. A. Pequito. 31 pp., 8vo. Lisboa, 1879	"
Roumania. Requisitiunile si ofrandele pentru Trebuintele armatei Romane in Resboiul din 1877-78 de Alexandre Pencovici. viii and 67 pp., 4to. Bucuresci, 1879	The Central Statistical Office
Russia—	
Société Impériale Russe de Géographie, Procès verbaux des Séances Plénières Mensuelles, Jan.—April, 1879. 4to. St. Pétersbourg	The Society
ST. PETERSBURG. Huitieme Session du Congrès International de Statistique à, Rapports et Résolutions. 144 pp., 8vo. St. Petersburg, 1872.....	Mrs. N. Tayler
Spain. Boletim de la Sociedad Geografica de Madrid. Tomo 6, Nos. 2 and 3. 8vo. Madrid.....	The Society
United States—	
Agriculture, Department of, Special Report upon the Condition of Crops and Live Stock, April, 1879. No. 13. 26 pp., 8vo. Washington, 1879.	The Commissioner of Agriculture
Bureau of Statistics—	
Monthly Reports of the, January — June, 1875. 4to.	Joseph Nimmo, Esq., jun.
Quarterly Reports of the, for the year ended 30th June, 1877. 580 pp., 8vo.	"
Annual Reports of, on the Commerce and Navigation for the years 1869, 1875, 1877 and 1878. Parts 1 and 2, 8vo. Washington	"

Donations—Contd.

Donations.	By whom Presented.
United States—Contd.	
Bureau of Statistics—Contd.	
Imports and Exports, summary statement of the, for the month ended 31st March, 1879, and for the nine months ended the same. [Corrected to 10th May, 1879.] No. 9. 10 pp., 4to.	Joseph Nimmo, Esq., jun.
IOWA. Report of the Secretary of the State Agricultural Society for the year 1877. 708 pp., 8vo. Des Moines, 1878.....	The State Library of Iowa
IOWA. Report of John H. Looby, Adjutant-General and A.Q.M. General of the State of, to Hon. J. G. Newbold, Governor, October, 1876, to October, 1877. 100 pp., 8vo. Des Moines, 1877	"
MASSACHUSETTS. Board of Agriculture, Annual Reports of. 2nd series. Nos. 15, 16, 18, 22, and 24, for the years 1867-69, 1870-71, 1874-75, and 1876-77. Plates, &c., 8vo. Boston	American Statistical Association
MASSACHUSETTS. Inland Fisheries, Annual Reports of, Nos. 3 to 5, and 7 to 11, for the years 1869-71, 1873-77. 8vo. Boston	"
MASSACHUSETTS. General Hospital, Annual Reports of, for the years 1845-46, 1850-51, 1859-62, 1865-68, 1870, and 1876-78. Plates 8vo. Boston	"
MASSACHUSETTS. Nautical School, Annual Reports, Nos. 8, 9, and 13, October, 1867-68, and 1872.....	"
MASSACHUSETTS. Bureau of Statistics of Labor, Tenth Annual Report of the, January, 1879. No. 31, xviii and 180 pp., 8vo. Boston	C. D. Wright, Esq., Chief of the Bureau
MASSACHUSETTS. State Board of Health, Tenth Annual Report of the, January, 1879. xlvii and 309 pp. Plates, &c. 8vo. Boston, 1879	State Board of Health
NEW YORK. Thirtieth Annual Report of the Trustees of the Astor Library, 1879. 32 pp., 8vo.	The Trustees of the Astor Library
RHODE ISLAND. Fifth and last Annual Report of the State Prison Commission, 1879. 33 pp., plans, &c., 8vo. Providence.....	Dr. E. M. Snow
SAN FRANCISCO. Twenty-sixth Annual Report of the Mercantile Library Association of, 1878. 34 pp., 8vo. San Francisco, 1879	The Librarian
Academy of Natural Sciences of Philadelphia, Proceedings of the, 1878. Parts 1 to 3, January—December, plates, 8vo.....	The Academy
Franklin Institute, Philadelphia, Journal of the. Vol. lxxvii, No. 5, 8vo.....	The Institute
American Geographical Society, Bulletin of the, 1878, No. 4, and 1879, No. 2. 8vo. New York	The Society
Bankers' Magazine, New York, vol. xiii, Nos. 10 and 11, 8vo.	The Editor
Western, The, new series, vol. v, Nos. 2 and 3, March—June, 1879, 8vo. St. Louis	"
Uruguay. Sinopsis Estadística de la Republica Oriental del Uruguay Correspondiente à los años 1876-77 y parte del movimiento del año 1878. 94 pp., imp. 8vo. Montevideo, 1879	The Directorate General of Statistics

Donations—Contd.

Donations.	By whom Presented.
India, Colonial, and other Possessions.	
India—	
British, Review of the trade of, for the official year 1877-78, by J. E. O'Connor, Assistant Secretary to the Government. 45 pp., folio. Calcutta, 1879....	The Indian Government
BENGAL. Asiatic Society of, Proceedings of the, 1878. Nos. 9 and 10 (November and December), 1879, No. 1, January. 8vo. Calcutta	
BOMBAY. Royal Asiatic Society, Bombay branch, the Journal of the, 1878, No. 36, vol. xiv. 163 and xvii pp., plates, &c., 8vo., 1879	The Society
	„
Mauritius—	
Almanack and Colonial Register for 1879. 344 pp., 8vo.	The Governor of Mauritius
Seventh Annual Report of the Registrar-General on Births, Deaths, and Marriages in 1878. 75 pp., folio	
	J. Kyshe, Esq., Registrar-General
New South Wales—	
Financial Statement of the Hon. James Watson, Colonial Treasurer, made 12th February, 1879. 137 pp., folio	The Agent-General for New South Wales
Sydney and Suburbs, Monthly Reports of the Registrar-General on the Vital Statistics of, for January—March, 1879. Folio.	
	„
New Zealand—	
<i>Friendly Societies—</i>	
Returns for the year ending 30th June, 1877. No. H-19, 8 pp., folio	F. W. Frankland, Esq., Actuary
First Annual Report of the Registrar of, 1878. No. H-14	
Table of Rates of Contributions with Introductory Observations. Folio. Wellington	„
Statistics of the Colony of, for the year 1877, with abstracts from the Agricultural Statistics of 1878. (2 copies.) Folio. Wellington	The Registrar-General of New Zealand
Queensland. Queensland Gazette, Supplement, containing "Vital Statistics," in monthly numbers. Folio. Brisbane	H. Jordan, Esq., Registrar-General
South Australia. Statistical Register for 1877. Folio....	J. Boothby, Esq.
Tasmania. Mercury, The, occasional copies, containing "Vital Statistics." Folio. Hobart Town	E. Swarbreck Hall, Esq.
Victoria—	
Mining Surveyors and Registrars, Reports of the, quarters ended Sept. and Dec., 1878. Folio. Melbourne	The Registrar of Mines
Statistical Register of the Colony of, for the year 1877. General Index to the. 6 pp., folio	
Part 7.—Law, Crime, &c.	H. H. Hayter, Esq., Government Statist
„ 8.—Interchange.	
„ 9.—Religious, Moral, and Intellectual Progress. Folio. Melbourne, 1878	

Donations—Contd.

Donations.	By whom Presented.
Victoria—Contd.	
Statistics of Friendly Societies for the year 1877, with Introductory Report, xxiv and 90 pp. Folio	H. H. Hayter, Esq., Government Statist
England and Wales—	
Births, Deaths, and Marriages in, Fortieth Annual Report of the Registrar-General of (abstracts of 1877). [C-2276.] 8vo. 1879	The Registrar-General of England
Quarterly Return of Marriages in, to December, 1878, and of Births and Deaths in, to March, 1879. No. 121. 8vo. London	
Friendly Societies, Reports of the Chief Registrar of, 1877. Part II (C), Appendix (I). Trade Unions. 388—III. Folio	The Chief Registrar of Friendly Societies
Ireland—	
Weekly Returns of Births and Deaths of eight large towns, current numbers, with an Annual Summary. 8vo	The Registrar-General of Ireland
Quarterly Returns of Marriages in, to December, 1878, and of Births and Deaths in, to March, 1879. No. 61. 8vo. Dublin	
Statistical and Social Inquiry Society of, Journal of the. Vol. vi, parts 40 and 42 to 47, and 49 (July, 1871 to February, 1876). Vol. vii, Nos. 1 to 5, Parts 50 to 54 (December, 1876—August, 1878), with Index to Parts 1 to 39, vols. i to v. November, 1847, to November, 1870. 8vo. Dublin	The Society
Dublin Metropolitan Police, Statistical Tables of the, for the year 1878. 61 pp., folio. Dublin, 1879	The Commissioner Dublin Metropolitan Police
Scotland—	
Weekly and Monthly Returns of Births, Deaths, and Marriages in the eight principal towns of, current numbers. 8vo	The Registrar-General of Scotland
Quarterly Return of the Births, Deaths, and Marriages in, quarter ending 31st March, 1879. No. 97. 8vo.	
Supplement to the Monthly and Quarterly Returns of the Births, Deaths, and Marriages in, during the year 1878, also the Vaccination Returns, 1877. 8vo. Edinburgh, 1879	The City Chamberlain
EDINBURGH, City of, Accounts published in the year 1878. Folio. Edinburgh	
EDINBURGH. Royal Society of, Session 1877-78	The Society
Transactions of the, vol. xxviii, part 2, diagrams and plates. 4to.	
Proceedings of the, vol. ix, No. 100. 8vo	Dr. J. B. Russell
GLASGOW, Report on the air of, chiefly relative to enclosed spaces and smoke, by William J. Dunnachie. 18 pp., diagrams, 4to. Glasgow, 1879	
GLASGOW. Mortality Tables of the City of, with Remarks by Medical Officer, for the quarters ending September and December, 1878. 8vo.	"

Donations—Contd.

Donations.	By whom Presented.
United Kingdom—	
British Yarns, &c., Return of Mexican and South American Import Duties on, 339. 90 pp., 8vo. 1878 } <i>Cattle, &c., and other Articles of Food—</i>	The Board of Trade
Number of Live Cattle, &c., and Acreage of Crops in United Kingdom; Quantities and Values of Imports and Average Prices. P.P. No. 273 and 401. 1878. Folio	"
Colonial and other Possessions, Statistical Abstract for the several, in each year from 1863 to 1877. 15th number. [C-2306.] 8vo. 1879	"
Trade and Navigation, Monthly Returns of. Current numbers	"
Factories and Workshops, Report of the Chief Inspector of, for the year ending 31st October, 1878. [C-2274.] 8vo.	A. Redgrave, Esq.
Bristol Incorporated Chamber of Commerce, &c. Report of the Council and Proceedings at the Annual Meeting on 9th April, 1879, with appendix. 76 pp., 8vo. Bristol	L. Bruton, Esq., F.S.S.
Colonial Office List, The, 1879. 426 pp., cloth, maps, 8vo. London, 1879	Messrs. Harrison and Sons, Pall Mall
Foreign Office List, The, and Diplomatic and Consular Handbook, January, 1879. 317 pp., cloth, maps, 8vo. London	"
Liverpool Chamber of Commerce. Report of the Special Committee on the State of Trade in connection with the Discrediting of Silver as Money. 20 pp., 8vo. Liverpool, 1879	S. Williamson, Esq.
London Hospital. Reports of the Medical, Surgical, and Skin Department, Registrars, &c., &c., 1877. 8vo. London	The House Com- mittee
North Eastern Railway, Statement showing length of Lines Open, Traffic Receipts, and the average Receipts per mile, from 1859 to 1878. Compiled by T. F. Hedley, F.S.S. 1 sheet, 4to.	The Compiler
Post Magazine Almanack and Insurance Directory, 1879. 144 pp., 8vo. London	W. E. Stark, Esq.
<i>School Board for London—</i>	
Fifth Report of the Statistical Committee, November, 1878	The School Board for London
Report of the Bye-Laws Committee for the half-year ended Christmas, 1878	
Report of the School Management Committee for the half-year ended 27th September, 1878. Folio	
Sussex (West), Annual Reports on the Condition of the combined Sanitary District of. By Charles Kelly, M.D. Nos. 1 to 5. 8vo. Horsham, 1875-79	Dr. Kelly
Actuaries, Journal of the Institute of. Vol. xxi, parts 4 and 5, Nos. 114 and 115. Diagram, 8vo. London, 1879	The Institute
Arts, Journal of the Society of. Current numbers. 8vo. London	The Society

Donations—Contd.

Donations.	By whom Presented.
United Kingdom—Contd.	
British Association for the Advancement of Science, Report of the, 1878. Dublin Meeting, and List of Members, &c. Diagrams, &c., 8vo. London, 1879	The Association
Civil Engineers, Minutes of Proceedings of the Institution of. Vols. lv and lvi, Session 1878-79, parts 1 and 2, maps, plates, &c. 8vo. London	
East India Association, Journal of the. Vol. xii, No. 1 38 pp., 8vo. London, 1879	The Institution
	The Association
<i>Howard Association—</i>	
Report, 1878. 20 pp., 8vo. London	W. Tallack, Esq., Secretary to the Association
Homicide and Capital Punishment, The Law of. Reprint of a Debate in Parliament, 12th June, 1877. 37 pp., 8vo. London, 1878	
Several reprinted Letters, Articles and Pamphlets on Crime, Pauperism, and Capital Punishment	
Labourer's Friend, The, Magazine of the Society for improving the Condition of the Labouring Classes. No. 261. April, 1879. 8vo. London	The Society
Literary and Philosophical Society of Liverpool, Proceedings of. Session, 1877-78. Vol. xxxii, 383 pp., map, diagrams, &c., 8vo. Liverpool, 1878	
	"
<i>National Association for the Promotion of Social Science—</i>	
Sessional Proceedings of the. Vol. xii, Nos. 1 to 9. 8vo. London, 1879	The Association
Transactions of the, Aberdeen Meeting, 1877, and Cheltenham Meeting, 1878. Diagrams and plans, 8vo. London	
Royal Agricultural Society of England, The Journal of the. 2nd series. Vol. xv, part 1, No. 29, plates, 8vo. London	The Society
Royal Asiatic Society, Journal of the. New series. Vol. xi, part 2. (April, 1879.) 8vo. London	
Royal Geographical Society, Proceedings of the. New series. Vol. i, Nos. 5 and 6. 8vo. London	"
Royal Institution, Proceedings of the. Vol. viii, part 6; and Vol. ix, part 1, Nos. 69 and 70, 1879. 8vo.....	The Institution
Royal Medical and Chirurgical Society, Proceedings of the. Vol. viii, No. 7, 8vo. London	
Royal United Service Institution, Journal of the. Vol. xxii, 1878, No. 98, and vol. xxiii, 1879, No. 99, maps, plans, &c., 8vo. London	The Society
Surveyors, Transactions of the Institution of. Vol. xi, parts 10 to 13. 8vo. London	
	"
BEHM (G.). Nachtrag pro 1877 zu der Statistik der Mortalitäts-, Invaliditäts-, und Morbilitäts-Verhältnisse bei dem Beamten-Personal der Deutschen Eisenbahn-Verwaltungen. 47 pp., 8vo. Berlin, 1879	Verein Deutscher Eisenbahn-Verwal- tungen Berlin
BRUTON (L.). Our Bankruptcy Laws. Reprint of letters by "Procreditors" from Capital and Labour with emendations and additions. 40 pp., 8vo. London, 1879	
	The Author

Donations—Contd.

Donations.	By whom Presented.
CARR (HENRY). Our Domestic Poisons; or the Poisonous Effects of certain Dyes and Colours used in Domestic Fabrics. 59 pp., 12mo. London, 1879....	The Author
DOYLE (PATRICK). A contribution to Burman Mineralogy. (Reprinted from the "Rangoon Gazette" for private circulation only.) 15 pp., 12mo. Calcutta, 1879	"
DUN (JOHN). Notes on the Chancellor of the Exchequer's Banking and Joint Stock Companies Bill (1879). 65 pp., 8vo. London, 1879	E. Stanford, Esq.
FICKER (DR. ADOLF). Der Unterricht in der Statistik an den Österreichischen Hoch- und Mittelschulen. 58 pp., 8vo. Wien, 1876	Mrs. N. Tayler
HUTCHESON (A.). A collection of Treatises relating to the National Debts and Funds, also to the South-Sea Stock and Scheme. Folio. London, 1821	Professor Jevons
MACCARTHY (REV. E. F. M.). The Government Code: its Injurious Effect upon National Education. 16 pp., 12mo. London, 1879.....	The Author
Analysis of Elementary Education Statistics issued by the Education Department for the year ending 31st August, 1875. 20 pp., 8vo. Birmingham, 1876	
Certain Weak Points of the Elementary Education Code. (Reprinted from the "Journal of the Society of Arts.") 24 pp., 8vo. London, 1877	
In what way is it desirable to connect the system of Primary Schools with the Endowed and other Schools that supply Secondary Education? 13 pp., 8vo. London, 1879	
MOSSER (FRANÇOIS). L'Esprit de l'Economie Politique. 2 ^{me} edition. 12mo. 1879	"
NEUMANN-SPALLART (F. X. v.). Der Schutz in der Weltwirthschaft. 32 pp., 8vo. Berlin, 1879	"
SAUNDERS (WILLIAM). Through the Light Continent, or the United States in 1877-78. 409 pp., cloth, 8vo. London, 1879	"
SLAUGHTER (MIHILL). Railway Intelligence, January, 1879. No. 20 (compiled from official returns). 148 and 162 pp., 8vo. London, 1879	"
THUBRON (ROBERT). The Dock and Port Charges of Great Britain and Ireland. 448 pp., cloth, maps, 8vo. London and Liverpool, 1877	"
WASSA EFFENDI. The Truth on Albania and the Albanians, Historical and Critical. Translation by E. St. J. Fairman. 48 pp., 8vo. London, 1879	The Translator
WILLIAMS (R. P.). On the Economy of Railway Working. Plates and diagrams. 8vo. London, 1879	The Author
<i>Periodicals—</i>	
Athenæum, The. (Monthly parts) Current numbers	The Editor
Bankers' Magazine (London)	"
Commercial World, The.....	"
Economist, The	"
Finance Chronicle and Insurance Circular. Vol. viii, } May, 1878, to April, 1879. 388 pp., folio. London }	"

Donations—Contd.

Donations.	By whom Presented.
<i>Periodicals—Contd.</i>	
Insurance Gazette, The Current numbers	The Editor
Insurance Record, The "	"
Investors' Monthly Manual, The "	"
Nature "	"
Review, The "	"
Statist, The "	"

Purchased.

Annales de Démographie Internationale. Nos. 6 (fin), 7, and 8. 8vo. Paris, 1878.

Annales d'Hygiène publique. 3^{eme} série, Nos. 1—6. 8vo. Paris, 1879.

Annual Register, The, for 1878. 8vo. London, 1879.

Archivio di Statistica. Anno III, Nos. 2 and 3. 8vo. Roma, 1879.

* Browne (W. A., LL.D.). The Money, Weights and Measures of the Chief Commercial Nations in the World, with the British Equivalents. Fifth Edition. 95 pp., 12mo. London, 1876.

Index Society, Publications of the, 1878.

1. What is an Index? By H. B. Wheatley, F.S.A. 132 pp.

2. An Index of the Royalists whose Estates were confiscated during the Commonwealth. By Mabel G. W. Peacock. 111 pp.

3. Index of Municipal Offices in England and Wales, with an Historical Introduction. By G. Lawrence Gomme. 77 pp., cloth, 4to.

Journal des Economistes. 4^{eme} Série, Nos. 13—17, Jan.—May, 1879. 8vo. Paris.

Reports of the House of Commons for 1715 to 1801, with a General Index to the subject-matters. 16 vols. Demy folio.

Rumsey (H. W., M.D., F.R.S.). Essays and Papers on some Fallacies of Statistics concerning Life and Death, Health and Disease. 322 pp., 8vo. London, 1875.

Science Index, The. Edited by A. Hildebrandt. Vol. i, Nos. 1 and 2, 4to. 1879.

Times, The, from 1864 to 1868. 20 vols. Folio.

JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1879.

REPORT of the COUNCIL for the FINANCIAL YEAR ended 31st December, 1878, and for the SESSIONAL YEAR ending 30th June, 1879, presented at the FORTY-FIFTH ANNIVERSARY MEETING of the STATISTICAL SOCIETY, held at the Society's Rooms, Somerset House Terrace (King's College Entrance), Strand, London, on the 30th of June, 1879, with an ACCOUNT of the PROCEEDINGS at the Meeting.

The President, G. J. SHAW-LEFEVRE, ESQ., M.P., in the Chair.

THE circular convening the meeting was read, and the minutes of the last ordinary meeting were read and confirmed.

The following report was then read:—

Report of the Council.

The Society is now in the forty-fifth year of its existence, and fully maintains the position it has obtained as respects the number of its members, and its power to fulfil the objects for which it was established.

In the past year the changes in the *personnel* of the Society show a considerable increase on balance, the numbers having risen from 683 to 746. The result compares as follows with the average of the previous ten years:—

Particulars,	1878.	Average for the Last Ten Years.
Number of Fellows on 31st December	746	509
Life Members included in the above	115	76
Number lost by death, withdrawal or default	45	28
New Fellows elected (and one resignation cancelled)	108	60

It is satisfactory to be able to add that this prosperous con-

dition of things continues; sixty-eight new members having been elected since the 1st of January last.

The financial condition of the Society also shows highly satisfactory progress. The receipts from all sources in 1878 have been 1,732*l.*, as compared with 1,597*l.* the previous year, although that year showed a great improvement on its predecessors. The investments of the Society at the present time are increased to 2,400*l.* of New Three per Cents, as compared with 2,000*l.* a year ago. The following is a comparison of certain particulars for last year, with the average of the previous ten years:—

Particulars.	1878.	Average of Last Ten Years.
	£	£
Balance at beginning of year	312	240
Receipts from all sources	1,732	1,140
Cash balance at end of year.....	194	257
Surplus of assets over liabilities	3,979	2,405

The resources of the Society have thus increased during the year, and the improvement has continued up to the present time. Financially, the Society has never been in a better position than it is now. A comparison of the principal figures at intervals of ten years from the formation of the Society, will show the progress that has been made:—

Comparison of Condition of Society at Intervals of Ten Years.

Year.	Number of Fellows.	Income.	Expenditure.	Amount Invested.	Liabilities.	Cash Balance.
		£	£	£	£	£
1838	392	851	794	867	27	90
'48	406	791	770	867	276	64
'58	359	824	682	867	170	311
'68	387	796	726	1,043	112	216
'78	746	1,732	1,345	1,902	168	194

It will be noticed that great progress has been made during the last decade. The following table gives the particulars for each year of that period:—

Year.	Number of Fellows.	Income.	Expenditure.	Amount Invested.	Liabilities.	Cash Balance.
		£	£	£	£	£
1869	400	810	826	1,136	115	200
'70	403	852	839	1,136	135	214
'71	431	880	804	1,136	125	290
'72	454	1,112	806	1,322	135	411
'73	530	1,248	1,097	1,507	135	376
'74	588	1,377	1,491*	1,507	460	62
'75	607	1,231	1,733*	1,207	216	94
'76	611	1,438	1,340*	1,207	187	192
'77	683	1,597	1,286	1,398	201	312
'78	746	1,732	1,345	1,902	168	194

* The expenditure of these years was affected by the heavy expenses incident to moving into new premises.

Confirmation of the steady progress of the Society may be again referred to with satisfaction, as indicated by the increasing sale of the Society's *Journal*. The average of the annual sales

	£
In the ten years 1841-50 was	56
„ '51-60 „	83
„ '61-70 „	97
In the eight years '71-78 „	144

The amount realised in 1878 was 169*l.*, which exceeds that of any previous year. The highest of any previous year was 1873, in which the receipts were 167*l.*, with that exception the highest receipt in any previous year was 159*l.*

The library of the Society increases in size rapidly, chiefly from the numerous and liberal donations received from all parts of the world, and of late has been made much more use of by its Fellows than formerly.

The Opening Address of the President was given on the re-assembling of the Society in November, and the papers read and the members elected at each of the monthly meetings are recorded as follows:—

SESSION 1878-79.

First Ordinary Meeting, Tuesday, 19th November, 1878.

The President, G. J. SHAW-LEFEVRE, Esq., M.P., in the Chair.

The following were elected Fellows:—

William McKewan.	Alexander Turnbull.
T. G. P. Hallett, M.A.	William Robert Cornish.
Joseph Todhunter Pim.	Abdur Rahman, Moulvie Syud.
Robert McCheane.	Thomas Parry.
Francis Tress Barry.	Frederick William Frankland.
Clement Gardiner.	Thomas Bowden Green, M.A.
Charles Smith, M.R.I.A.	Michal Babel Isaacs.
Henry Oppenheim.	Robert J. Moffat.
James Smith.	W. T. Dent.
James Davis.	Mihill Slaughter.
Thomas Kennedy.	Alfred Benjamin Merrick.
Joseph Henry Maughan.	Etienne Pellereau.
Charles Guthrie.	Yosuharu Yoshii.
Alexander M. Lawrence.	Ernest Crewdson.
William Whiteford.	Henry R. Bence Jones.
Henry Nathan.	Henry R. Newport.

(a) The President delivered an Opening Address, and declared the “Howard Medal” for 1878 (with *zol.*) to be awarded to

SURGEON JOHN MARTIN, of the Army Medical Department,
also that an extra prize “Howard Medal” had been awarded to

CAPTAIN H. HILDYARD, of the 71st Highland Light Infantry.

(b) Professor Jevons exhibited and explained “The Arithmometer of M. Thomas,” showing to what extent it could be made available to Statisticians.

Second Ordinary Meeting, Tuesday, 17th December, 1878.

RICHARD B. MARTIN, Esq., M.A., Treasurer, in the Chair.

The following were elected Fellows:—

James H. Crossman, J.P.	George Farren, M.I.C.E.
W. Palmer Fuller.	James Mitchell, J.P.
Thomas Lucas, J.P.	

Dr. Mouat, F.R.C.S., Foreign Secretary, read—

Reports on:—1. The Fourth Session of the Permanent Commission of the International Statistical Congress, held in Paris, 10th—20th July, 1878.

2. The First Session of the International Congress of Demography and Medical Geography, held in Paris, 5th—10th July, 1878.

3. The Second Session of the International Prison Congress, held in Stockholm, 20th—27th August, 1878.

A discussion followed on “The best form of Statistical Annual for International Purposes.”

Third Ordinary Meeting, Tuesday, 21st January, 1879.

The President, G. J. SHAW-LEFEVRE, Esq., M.P., in the Chair.

The following were elected Fellows:—

George Phillips Bevan.	|	John Peter Gassiot, J.P.
George Gibson Richardson, J.P.	|	Edward Williams.

Mr. Robert Giffen read a Paper “On the Fall of Prices of Commodities in Recent Years.”

Fourth Ordinary Meeting, Tuesday, 18th February, 1879.

STEPHEN BOURNE, Esq., in the Chair.

The following were elected Fellows:—

John Kemp Welch, J.P.	|	Robert McCheane, jun.
Aretas Akers-Douglas, J.P.	|	Henry Francis Partridge.
Rev. John Erskine Campbell-Colquhoun.		

Mr. C. Walford read a Paper on “The Famines of the World, Past and Present.” Part II.

Fifth Ordinary Meeting, Tuesday, 18th March, 1879.

The President, G. J. SHAW-LEFEVRE, Esq., M.P., in the Chair.

The following were elected Fellows:—

Robert Owen White, J.P.	|	Hamilton Noel Hoare.
Mrs. N. Tayler.		

The undermentioned were elected Honorary Members:—

Monsieur Le Dr. E. Janssens, of Brussels.
 Monsieur Arthur Chervin, of Paris.
 Signor Gerolamo Boccardo, of Genoa.
 Professor Dr. Fr. Xav. Von Neumann-Spallart, of Vienna.

Mr. H. H. Hayter, Government Statist of Victoria, and an Honorary Member of the Society, read a Paper “On the Colony of Victoria: its Progress and Present Position.”

An Extra Meeting, held Tuesday, 1st April, 1879.

The President, G. J. SHAW-LEFEVRE, Esq., M.P., in the Chair.

Mr. Stephen Bourne read a Paper “On Some Phases of the “Silver Question.”

Sixth Ordinary Meeting, Tuesday, 15th April, 1879.

SIR RAWSON W. RAWSON, C.B., K.C.M.G., Vice-President,
in the Chair.

The following were elected Fellows:—

H. C. McCrea, J.P.	Charles N. Newdegate, M.P.
William Poole.	Thomas J. C. L. Bordman.
George S. Baden-Powell, M.A.	Robert Leabon Curtis.
James Charles Murray.	David MacIver, M.P.
Charles L. Cunningham, M.R.C.S.	J. W. Lyall.
William M. Neil.	George Palmer, M.P.

Robert Adam.

Mr. E. G. Ravenstein, F.R.G.S., read a Paper “On the “Geographical Distribution of the Celtic Speaking Population of “the British Isles.”

Second Extra Meeting, held Tuesday, 6th May, 1879.

The President, G. J. SHAW-LEFEVRE, Esq., M.P., in the Chair.

Dr. W. Neilson Hancock, F.R.I.A., of Dublin, read a Paper on “The Feasibility of Compulsory Education in Ireland.”

Seventh Ordinary Meeting, Tuesday, 20th May, 1879.

WM. NEWMARCH, Esq., F.R.S., Honorary Vice-President, in the Chair.

The following were elected Fellows:—

E. G. Man.	Thomas Beggs.
Major-General Henry Hyde, R.E.	Thomas Hawksley, C.E., F.R.S.
Cecil C. Balfour.	Jesse Collings, J.P.
Lord Colin Campbell, M.P.	Wallwyn Poyer B. Shepherd, M.A.
David Levison.	W. Cave Thomas.
John Rüntz.	Alfred Moore, C.E.
W. A. H. Martin.	Arthur H. Wansey.
George Samuel Crisford, F.I.A.	John Westlake, Q.C., LL.D.
Daniel Grant.	William Saunders.
Isaac B. Cooke.	W. Bickford-Smith, J.P., D.L.

Mr. John B. Martin, M.A., read a Paper on “Some Effects of a “Crisis on the Banking Interest.”

Eighth Ordinary Meeting, Tuesday, 17th June, 1879.

SIR RAWSON W. RAWSON, C.B., K.C.M.G., Vice-President,
in the Chair.

The following were elected Fellows :—

Herbert Philips.
W. Mills Baker.
Rev. E. F. M. MacCarthy, M.A.
William Weir.
Edward Crompton Lloyd Fitzwilliams.
Louis Borchardt, M.D.
John Yeats, LL.D.
Wilson Lloyd, F.R.G.S.
George Auldjo Jameson.
Rowland Hamilton.
George Norgate Hooper.

W. Bayne Ranken.
Jesse Quail.
Henry Jones Evans, J.P.
William Layton Lowndes, J.P., D.L.
Thomson Hankey, M.P.
Charles Gairdner.
Anderson Kirkwood, LL.D.
The Baron de Ferrieres, J.P.
James Price, F.R.G.S.
Russell Scott.
John G. Rhodes.

George Edward Francis.

Dr. W. A. Guy, F.R.S., read a Paper "On Tabular Analysis."

It has again to be noticed, as was the case a year ago, that a large proportion of the papers read treated of subjects of an economical character. It is on these subjects mainly that suitable papers have been submitted to the Society. It would of course be undesirable that the Society should always keep in the same groove, and that so much of its time for meetings should be given up every year to economic statistics, but the recent interest taken in these subjects has been very great, and appears to have amply justified the Society in giving, for a time at least, this special direction to its efforts. The meetings during the session have again been very well attended, and the constant additions to the membership, and increase of the *Journal* sales above referred to, indicate the acceptability of the Society's efforts to the public. The Society's proceedings during the last two years, it may be affirmed, comprise a most thorough discussion of the situation of trade and commerce throughout the world, and the record will be invaluable for future reference. In addition to the papers above mentioned, whose subjects are noted, the President's opening address, it will be remembered, was also devoted mainly to the consideration of economic questions. The address, with the sanction of the Council, was printed in a separate form under the title of "A Decade of "Inflation and Depression," with satisfactory results. The sales of this separate publication have considerably more than covered the additional cost of printing involved.

During the session there has been a pretty severe pressure of good papers offered to the Society, and in addition to the usual monthly meetings, it has been necessary to hold two extra meetings for reading and discussion. The pressure seems likely to continue

during the next session, and it may be advisable to consider whether in future the arrangement for a few extra meetings should not be made at the beginning of the session.

At Home during the year 1878, the Statistical Society was represented by its President at the meeting of the British Association held in Dublin in August, and by James Heywood, Esq., M.A., F.R.S., the late President, and other Fellows, at the meeting of the National Association for the Promotion of Social Science, held in October at Cheltenham; and *Abroad*, the Society was represented by Dr. F. J. Mouat, the Foreign Secretary, as a special delegate, at—

1. The Fourth Session of the Permanent Commission of the International Statistical Congress, held in Paris, in July.

2. The First Session of the International Congress of Demography and Medical Geography, held also in Paris, in July, and

3. The Second Session of the International Prison Congress, held in Stockholm, in August.

The meeting of the Demographic Congress is commemorated by a bronze medal that was struck on the occasion. A copy of the medal was presented to this Society through Dr. Mouat, and is produced to the meeting for inspection.

The Council sympathising with the general regret expressed at the loss recently by fire of the Birmingham Free Library, and being desirous of contributing towards its re-establishment, directed that a set of the Society's *Journal*, as complete as circumstances would permit, should be forwarded to that Institution, in furtherance of this object; and the Free Library Committee have, in return, expressed their hearty thanks for the gift.

At the Council meeting held on the 16th January, 1879,

The President, G. J. Shaw-Lefevre, Esq., M.P., in the Chair,

It was moved by Dr. F. J. Mouat, F.R.C.S., Foreign Secretary, seconded by A. J. Mundella, Esq., M.P., and

Resolved unanimously :—

“ That an address of condolence be presented to Her Majesty
 “ the Queen, through His Royal Highness the Prince of
 “ Wales, Honorary President, expressing, on behalf of the
 “ Council and Members of the Statistical Society, their deep
 “ sympathy with the Queen and the Royal Family on the
 “ great loss which they and the nation have sustained in
 “ the death of the Princess Alice, Grand Duchess of Hesse;
 “ and—That the President of the Society be empowered to
 “ transmit this resolution to the Prince of Wales, with such
 “ expression of the feelings of the Society as will convey to
 “ Her Majesty their loyal and sorrowful sentiments on the
 “ subject.”

The foregoing resolution was transmitted and acknowledged in the following letters :—

“ STATISTICAL SOCIETY,

“ SOMERSET HOUSE TERRACE,

“ (KING'S COLLEGE ENTRANCE),

“ STRAND, W.C.,

“ LONDON, 24th January, 1879.

“ SIR,

“ By desire of the Council of the Statistical Society, of
“ which your Royal Highness is Honorary President, I have the
“ honour to transmit, for submission to Her Most Gracious Majesty
“ the Queen, the accompanying vote of condolence passed by the
“ Council at the first meeting held after the very sad event to
“ which it refers.

“ In forwarding the Resolution, I have been instructed by my
“ colleagues to express on their behalf and on that of the Members
“ of the Society, their deep and heartfelt sympathy for Her Majesty
“ and for the whole of the Royal Family on an occurrence which is
“ regarded by all classes of Her Majesty's subjects as a National
“ loss, as well from the estimable qualities and exalted character
“ of the Princess herself, as from the peculiarly sad and melancholy
“ circumstances in which it occurred.

“ I have the honour to be, Sir,

“ Your Royal Highness's

“ Most obedient humble Servant,

“ G. SHAW-LEFEVRE,

“ To His Royal Highness

“ *President Statistical Society.*”

“ The PRINCE OF WALES, K.G., &c., &c.,

“ Honorary President Statistical Society,

“ Marlborough House, S.W.”

“ SANDRINGHAM, NORFOLK,

“ 29th Jan., 1879.

“ SIR,

“ I am desired by the Prince of Wales to forward to you
“ the enclosed letter, which has been received by me in reply to the
“ vote of condolence passed by the President and Council of the
“ Statistical Society, and which, by his Royal Highness's direc-
“ tions, was transmitted to General Ponsonby to be submitted to
“ the Queen.

“ I am, Sir,

“ Your obedient Servant,

“ FRANCIS KNOLLYS.”

“ The Secretary Statistical Society.”

“ OSBORNE,

“ Jan. 27, 1879.

“ MY DEAR KNOLLYS,

“ I have had the honour of laying before the Queen the vote of condolence which you have transmitted by direction of his Royal Highness the Prince of Wales.

“ Her Majesty desires that the Queen’s sincere thanks may be returned to the President and Members of the Council of the Statistical Society for their kind and feeling expression of sympathy with the Queen and the Royal Family in their sorrow.

“ Yours very truly,

“ HENRY F. PONSONBY.”

“ F. KNOLLYS, Esq., C.B.”

The Howard Medal of 1878 (with 20*l.*) was awarded to Surgeon John Martin, L.R.C.S. Edin., of the Army Medical Department, at present serving in India with the Royal Artillery, for his essay on “*The Effects of Health and Disease on Military and Naval Operations* ;” and an *extra prize* Howard Medal was also awarded to Captain H. Hildyard, of the 71st Highland Light Infantry, for his essay on the same subject, as it was considered scarcely inferior to that of Surgeon Martin.

The subject of essays in competition for the Howard Medal of 1880 (with 20*l.* added) is to be—“The Oriental Plague in its Social, Economical, Political, and International relations ; special reference being made to the labours of Howard on the subject.”

The Society has had to lament the death of the following members since the last anniversary meeting :—

Fellows.

W. P. Pattison, F.I.A.

J. Hilton, F.R.S.

Thomas Sopwith, F.R.S.

J. M. Spence, F.R.G.S.

William Tayler, J.P., D.L.

Honorary Member.

M. le Dr. Otto Hübner, of Berlin.

Of these, both Mr. Sopwith and Mr. Tayler were well known as members of Council, and for the general interest they took in the affairs of the Society. Both have acted in the capacity of Auditors and Vice-Presidents, as well as ordinary members of the Council, and the Society has been much indebted to them for the ability and diligence they displayed. Mr. Tayler was also one of the delegates of the Society to the International Statistical

Congresses held at St. Petersburg in 1872, and at Buda-Pesth in 1876; and in 1870 he presented the Society with Fifty Guineas for the institution of a Prize Essay on "National and Local Taxation," which elicited two valuable papers, the one which gained the prize by Mr. R. H. Inglis Palgrave, and the other by Mr. George Scott, both to be found in the Society's *Journal*. By direction of the Council, special letters of condolence have been addressed by the secretaries to the widows of Mr. Sopwith and Mr. Tayler. The death of Mr. Pattison must also be specially noted, as that of a gentleman well known to members of Council, and taking an active interest in statistical matters. Mr. Pattison was a distinguished actuary, and rendered particular service to the Government in framing the tables, and generally making up the plan of the Act under which life assurance companies have to render their accounts to parliament.

The following list of Fellows proposed as Officers and Council of the Society for the Session 1878-79, is submitted for the consideration of the meeting:—

PRESIDENT.

THOMAS BRASSEY, ESQ., M.P.*

COUNCIL.

Major-General H. P. Babbage.
 Arthur H. Bailey, F.I.A.
 T. Graham Balfour, M.D., F.R.S.
 A. E. Bateman.*
 Stephen Bourne.
 Edward William Brabrook, F.S.A.
 James Caird, C.B., F.R.S.*
 J. Oldfield Chadwick, F.R.G.S.*
 Hammond Chubb, B.A.
 Hyde Clarke.
 Lionel L. Cohen.*
 Captain Patrick G. Craigie.
 Juland Danvers.
 Robert Giffen.
 Frederick Hendriks.

Henry Jeula, F.R.G.S.
 Prof. W.S. Jevons, M.A., LL.D., F.R.S.
 Francis Jourdan.
 Professor Leone Levi, LL.D.
 John B. Martin, M.A.*
 Richard Biddulph Martin, M.A.
 Frederic John Mouat, M.D.
 A. J. Mundella, M.P.
 Francis G. P. Neison.
 Robert Hogarth Patterson.
 Frederick Purdy.
 Ernest George Ravenstein, F.R.G.S.
 Sir R. W. Rawson, C.B., K.C.M.G.
 Ernest Seyd.
 Cornelius Walford, F.S.A.

Those marked * are new Members of Council.

TREASURER.

Richard Biddulph Martin, M.A.

SECRETARIES.

Hammond Chubb. | Robert Giffen.
 Professor William Stanley Jevons.

FOREIGN SECRETARY

Frederic J. Mouat, M.D.

The abstract of receipts and expenditure, and the balance sheet of assets and liabilities to the 31st of December, 1878, are subjoined, together with the Auditors' report for the same year:—

(I).—ABSTRACT of RECEIPTS and PAYMENTS for the YEAR ended 31st DECEMBER, 1878.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
Balance in } Bank, 31st } Dec., 1877 }	316	8 10	Rent	£200	- -
Less draft } not pre- } sented ... }	20	- -	Less sublet	122	10 -
	£296	8 10			77 10 -
Balance of Petty Cash .	9	- 2	Salaries, Wages, and Pension	309	15 6
Balance of Adver- } tisement Cash	6	14 3	Journal, Printing	£524	14 8
	312	3 3	" Shorthand } Reporters }	25	4 -
Dividends on 2,000 <i>l.</i> -s. -d., New } 3 per Cents	54	11 2	" Annual Index	5	5 -
			" Literary } Services }	3	13 6
Subscriptions received for:—			" Maclure } and Co., for Dia- grams ... }	21	12 6
24 Arrears	£50	8 -			580 9 8
528 for 1878	1,108	16 -	Advertising	71	13 -
18 in Advance.....	37	16 -	Ordinary Meeting Expenses	19	16 6
	1,197	- -	Library	32	5 2
570			Stationery and Sundry Printing ...	78	19 11
11 Compositions	294	- -	Postage, &c.	66	11 10
Journal Sales	£169	5 8	Fire and Lights	15	1 2
Journal by Adver- } tisements	16	18 3	Incidental Expenses	48	11 6
	186	3 11	Furniture and Repairs	14	17 5
			Statistical Dinner Club	4	10 -
			Anniversary Dinner	1	19 6
			Grant with Howard Medal	20	- -
			Howard Medals	3	8 -
					1,345 9 2
			Purchase of 528 <i>l.</i> 15s. 4d. New } 3 per Cents.	504	4 4
					£1,849 13 6
			Balance at } Drum- mond's .. }	192	14 7
			Less draft } not pre- } sented ... }	10	- -
				£182	14 7
			Balance of Petty Cash	11	9 -
			Balance of Adver- } tisement Cash ... }	-	1 3
				194	4 10
					£2,043 18 4
	£2,043	18 4			

(II).—BALANCE SHEET *of* ASSETS *and* LIABILITIES *on* 31st DECEMBER, 1878.

LIABILITIES.				ASSETS.			
	£	s.	d.	£	s.	d.	
Per Accounts for—							
December number } of Journal	114	11	10				
Annual Index to ditto	5	5	—				
Stationery and } Printing	27	12	4				
Miscellaneous items } as per list	20	18	—				

(III.)—BUILDING FUND (ESTABLISHED *by* COUNCIL, 10th July, 1873),
STATEMENT *of*—on 31st DECEMBER, 1878.

LIABILITIES.	\pounds	s.	d.
Brought forward from 1877—			
Donations £120 - -			
Interest on Invest- } ments }	13	-	9
			133 - 9
By donation from Council, a gift from Mr. Heywood, offered with Howard Medal of 1877 (not awarded) }	20	-	-
Interest on Invest- } ments for 1878 ... }	3	14	8
			23 14 8
			£156 15 5

ASSETS.	\pounds	s.	d.
By last Account (1877)—			
Invested in the name of the Treasurer, R. B. Martin—			
In Metropolitan) Consolidated) £130 8 6 cost	133	-	9
Stock }			
Purchased at 101½ 20 15 - ,,	21	2	9
" 103 2 9 5 ,,	2	11	11
Total Stock... £153 12 11			
			£156 15 5

“Auditors’ Report, 1878.

“STATISTICAL SOCIETY,

“KING’S COLLEGE ENTRANCE,

“STRAND, W.C., LONDON,

“2nd April, 1879.

“The Auditors appointed to examine the Treasurer’s Accounts of the Society,

“REPORT:—

“That they have carefully compared the Entries in the Books with the several *Vouchers* for the same, from the 1st January to the 31st December, 1878, and find them correct, showing the *Receipts* (including a Balance of 312*l.* 3*s.* 3*d.* from 1877) to have been 2,043*l.* 18*s.* 4*d.*, and the *Payments* (including the purchase of 528*l.* 15*s.* 4*d.* New Three per Cents) 1,849*l.* 13*s.* 6*d.*, leaving a Balance in favour of the Society of 194*l.* 4*s.* 10*d.*, at 31st December, 1878.

“They have also had laid before them an estimate of the *Assets* and *Liabilities* of the Society, the *former* amounting to 4,146*l.* 19*s.* 3*d.*, and the *latter* to 168*l.* 7*s.* 2*d.*,—leaving a Balance in favour of the Society of 3,978*l.* 12*s.* 1*d.*

“The amount standing to the credit of the Building Fund at the end of the year 1878 was 156*l.* 15*s.* 5*d.*,—invested in the name of the Treasurer, R. B. Martin, Esq.

“They further find that at the end of the year 1877 the number of Fellows on the list was 683, which number was diminished in the course of the year to the extent of 45 by Deaths, Resignations, and Defaulters, and that 107 new Members were elected, and the resignation of one Fellow was cancelled, leaving on the list, on 31st December, 1878, 746 Fellows of the Society.

(Signed) “FREDK. HENDRIKS, }
 “ A. E. BATEMAN, } *Auditors.*”
 “ J. O. CHADWICK, }

The PRESIDENT said he had great pleasure in moving the adoption of the report, which he thought the members would be of opinion showed that very satisfactory progress had been made by the Society during the past year financially and otherwise. The number of members had increased by no fewer than sixty-three, and was larger than in any previous year. They had, however, to regret the loss of some important members, including Mr. Sopwith, and Mr. Tayler, who had been for many years active members of the Society, and had served upon the Council. He regretted also to say that since the report was drawn up they had heard of the death of three other members of the Society, two of them men of great eminence, Sir Thomas Larcom, one of the earliest members, having been elected in 1843, and Lord Lawrence, who was elected in 1873. Although Lord Lawrence was not an active member of the Society, he need hardly say that any society was honoured by his membership. The fact of the sale of the *Journal* having increased year by year, was a satisfactory test of the working of the Society, and showed that its labours had been gradually more and more appreciated by the public. They had also a subject of congratulation in respect to the papers that had been read during the past year. If he were to single out some that were of special interest, he should refer to the paper by Mr. Giffen, "On the Fall of Prices of Commodities in Recent Years," the paper by Mr. Bourne "On Some Phases of the Silver Question," and the paper by Mr. Martin upon "Some Effects of a Crisis on Banking Interest." Those papers (following the course adopted in the previous year) were of an economical character, but they had also had some interesting papers on other subjects, and he might specially allude to the paper written by Dr. Guy upon Tabular Analysis, which showed that the Society did not confine itself to economical subjects, but also devoted itself to more scientific investigations in regard to statistics, which he was sure the members would not desire to see neglected. If during the past year the subjects had been mainly of an economical character, that had been forced upon them by the general condition of trade; but he thought that in future the Society should not confine itself to those subjects, to the neglect of others of equal importance, especially in relation to vital statistics. One subject which he thought would be especially forced upon their attention at no distant date was the question of their habitation. Members who had attended the recent meetings would be well aware that the rooms they at present occupied, though in many respects extremely convenient, were not large enough for their discussions, and it would be extremely desirable that the Society should find rooms more suited for its present numbers, and the kind of discussions that now took place. He thought there was a prospect of the question being soon reopened. Some years ago there was a proposal that some of the learned societies should join together, and endeavour to arrange to get a building with suitable rooms and a common lecture hall. Unfortunately the proposal broke down, but there was a prospect of the question being again raised. Mr. Siemens had offered a considerable sum of money to the Iron and Steel Institute for the purpose of building a house which several societies might occupy

if they could come to some understanding on the subject. If the proposal were carried out, some eight or ten societies like their own would join in occupying the same building. In that case they would have rooms for their library, which at present was not altogether what it should be. A better library and more commodious rooms for the discussion of papers would no doubt lead to an increase in the number of members, and in the prosperity of the Society. Even without such a prospect, he believed the Society would go on increasing during the next three or four years as it had done in the past. He could not conclude without congratulating the members upon the gentleman who had been nominated as his successor to fill the office of President. He had known Mr. Brassey for many years. He had already distinguished himself by his writings upon economical subjects, especially upon the question of labour. He was a man of indefatigable industry, and he was quite sure that under his auspices the Society would continue to increase in numbers and in importance. He begged to move "That the Report of the Council, the Abstract of Receipts and Payments, the Balance Sheet of Assets and Liabilities, the Statement of the Building Fund, and the Report of the Auditors for 1878, be adopted, entered on the minutes, and printed in the *Journal*."

Mr. WILLIAM NEWMARCH, F.R.S., said he had great pleasure in seconding the motion. He did not know that they had ever had a more satisfactory report presented to the members. The progress the Society had made since 1869, was such as many of them never expected to see realised. That they should have nearly doubled their members in ten years, and considerably more than doubled their income was exceedingly gratifying, and showed that the inquiries and investigations with which the Society concerned itself, were felt by the public to have a real and strong claim upon their support and sympathy. There were few things more remarkable than the alteration that had taken place during the last twenty-five or thirty years in the way in which public questions were discussed, especially questions of an economical character. No one was now listened to unless he could discuss such questions on grounds of fact and careful statistical observation, and that was precisely one of the changes which the Society was established nearly fifty years ago for the purpose of creating. The President had already touched upon the necessity which had arisen for more commodious house accommodation for that and other societies. There could hardly be two opinions upon the subject. When he had the honour of occupying the chair ten years ago, he, in conjunction with Dr. Guy and Dr. Farr, had paid considerable attention to the whole subject, and they thoroughly satisfied themselves that the time had arrived when one of the most efficient means by which the object of the Society and of some eight or ten kindred societies could be best promoted, would be a combination of interests for the purpose of establishing, at some convenient spot near the Houses of Parliament, or Charing Cross, a handsome commodious habitation, provided with two meeting rooms, one large and the other small, and with suit-

able rooms for libraries and business purposes. In such a building the various societies connected with the advancement of social science and kindred subjects might be concentrated. At present, as they knew to their inconvenience and their cost, those societies were scattered up and down London, in all sorts of directions. The expenses for routine purposes, housekeepers, messengers, librarians, secretaries and other officials, were very great, but by a concentration such as had been proposed the expenditure for services of that kind would be greatly economised. If the necessity was a real one ten years ago, it was much more real now. During the last two or three sessions, they had experienced extreme inconvenience in consequence of their limited accommodation. On several occasions, their discussions had been carried on under circumstances of great difficulty. With a better place and better arranged rooms, he thought they might have arrived at more satisfactory results. He thought it was certain that an effort must be made in a short space of time to increase their house accommodation. To do so in the part of London in which they were then located, was far more costly than persons imagined, who had not made themselves master of the facts: 5,000*l.*, or 10,000*l.*, or 20,000*l.*, seemed a very large sum for a learned society, with seven or eight hundred members, to contemplate spending for house accommodation, but the very largest of these sums would go but a small way to procure what was required. Any one society would require a very large capital for the purpose, but if eight or ten societies of equal standing and calibre to their own combined, he believed that under reasonable guidance they might succeed. Mr. Siemens had intimated his willingness to contribute a considerable sum (understood to be 10,000*l.*) to the Iron and Steel Institute. There were other projects all pointing in the same direction. There was a contemplated scheme by the guilds and corporation of London to establish somewhere in the West End a technical college, and other suggestions and schemes of a similar kind had been mentioned. He thought if the Council saw their way to take definite steps in the matter, it would be found not impossible to effect a combination of all those interests. He made these observations in a general sense and entirely upon his own responsibility, having no authority to speak for others. He saw in the room the President of the Institute of Actuaries, and a very active officer of the Social Science Association. They had always acted cordially with those two bodies, especially the Institute of Actuaries, and it was not impossible that those distinguished associations might turn their attention to the matter. The project was surrounded by great difficulties, the greatest being the exceeding cost, and the second the extreme importance of each society being satisfied that the accommodation to be assigned to it would be exactly what it wanted, and upon reasonable terms. He could not sit down without saying a word with regard to the manner in which the President had discharged the duties of his office during the two years of his presidency. The Society had never been better represented, or more efficiently administered. The report which had been read showed that the President had discharged the duties of his office in such a manner as to secure those objects which were

nearest his own heart, and most likely to advance the success of the body over which he presided.

The motion was unanimously adopted.

Dr. T. Graham Balfour, and Mr. W. H. Millar were appointed to be Scrutineers, and a ballot was then taken.

The Scrutineers having presented their report, the President announced that the gentlemen named in the printed list submitted to the meeting, were unanimously elected as the President, Council, and Officers for the ensuing year.

The PRESIDENT then announced that the Council had recommended that the subject of the Howard Medal for 1880 should be "The Oriental Plague in its Social, Economical, Political, and International Relations; special reference being made to the labours of Howard on the subject."

Dr. GUY said a resolution had been placed in his hands, which he had great pleasure in proposing; but before doing so he desired to add a few words to what had fallen from Mr. Newmarch with regard to house accommodation. When they got into their present quarters they felt they were fortunate in having obtained quarters at all. They had turned out on the whole not unsatisfactory, but they desired better arrangements especially for their meetings. The time might not be far distant when the Society would cease to be tenants of its present premises; and he feared that, when that time arrived, they would not be permitted to occupy them for more than a quarter of a year after the event which would terminate their tenancy. It was therefore a very important question to ask where they should look for accommodation. He could not speak too strongly of the difficulties involved in that question. He had done all he could to promote the object they had in view when it was proposed to effect it by co-operation, and he could only say that the obstacles in the way of such co-operation were very great. Once, when this Society invited other societies to co-operate, their proposals were received with something like enthusiasm. The officials of one society in particular encouraged us to expect that several of its rich members would be prepared to subscribe 1,000*l.* a-piece; but shortly afterwards the council of that society, for some reason or other, withdrew their support; one society was not satisfied with the site proposed, another made an unreasonable demand for space, a third must needs have a huge theatre for the accommodation of meetings of most improbable size, and so the scheme fell to the ground. Some time ago (after that failure) a member of the council of King's College called upon him with a scheme, cut and dried, for occupying a site on a level with the Adelphi Terrace, and he was very angry that he (Dr. Guy) did not at once, on the spot, offer to co-operate earnestly and vigorously in carrying it out. As to any future scheme, he thought they ought not to embark in it without some very definite understanding with other societies that they would be prepared to co-operate. Let no one consider the task

of bringing about co-operation an easy task. To some persons nothing would seem more natural than that the Government should give them a site. The Government felt itself under certain obligations to the Royal Society, and to some others to which it had previously given rooms in Somerset House; and accordingly established them at Burlington House, and one society that had no better claim than this Society has, found accommodation there. But as to making provision for other societies, he must be very sanguine who expected Government to do that. He might mention a curious circumstance in reference to King's College. After the Medical Department had been in operation for some time, they were anxious to find a site for a hospital somewhere in the neighbourhood, and they naturally cast their eyes upon the site now occupied by the Inland Revenue. It was then a wilderness, and had been allowed to continue such for scores of years. It had lain idle and brought in no rental for perhaps a century: but directly the council of the college made an application to the Government for it, the Government found out that they wanted it themselves. So it would be, he feared, if the societies were now to apply for a site on the embankment—on some part of the site which had already been allowed to lie waste and profitless for years. He (Dr. Guy) now begged to move a vote of thanks to the retiring President, the council and the officers of the Society, for their services during the past year, and to the chairman for presiding on the present occasion. With regard to the services rendered by the President, he had been anticipated by his friend and colleague, Mr. Newmarch; but he cordially agreed with all that Mr. Newmarch had said. They were all very much indebted to the President for the kind services he had rendered them, and for the regularity and ability with which he had presided over their deliberations. The officers of the Society too had been extremely active, and their efforts resulted in the present prosperous condition of the Society. The President in taking the chair on this occasion, had brought to a fitting conclusion the services he had rendered by his regular and efficient attendances at the meetings of the Society during the past two years.

Mr. FINCH seconded the motion, which was unanimously adopted.

The PRESIDENT said he begged to thank the members for the kind manner in which the vote of thanks had been passed, and Dr. Guy and Mr. Newmarch for the too flattering terms in which they had alluded to his services. The work in which he had been engaged in connection with the Society during the past two years had been a work of pleasure, in consequence of the cordial co-operation and assistance he had received from the honorary officers of the Society, to whom its success was so largely due. He was quite sure that the work of the Society during the past two years had added to its reputation. The papers which had been read, especially those by Mr. Newmarch, Mr. Mundella, and Mr. Giffen, would not be of simply fleeting, temporary interest, but would be of permanent value to future investigators. They were for the

most part of a reassuring character, and did not take a gloomy view of the prospects of the country, and he hoped that in future they would be found to have been prophetic as to the nation's progress.

Mr. GIFFEN said that he had had no expectation he would be called on. In arranging the business of the meeting the office bearers had every confidence that the President would reply satisfactorily for them, as in fact he had done. Having been called on, however, he would take the opportunity first of all of acknowledging on behalf of the Council and other officers of the Society the services which the President had rendered during his two years of office. They had been most happy to work with him, and much of their prosperity during the last two years was no doubt due to the ability with which he had discharged his duties, and the excellent inaugural addresses he had delivered. On behalf of the officers and Council, he had also to express the satisfaction they felt at the way in which the Society had just filled up the vacancy in the presidential office. They were very glad to welcome amongst them a gentleman who had rendered the services to statistical knowledge which Mr. Brassey had done, and who was otherwise so well qualified for the position. Although not taking an active part in their councils, Mr. Brassey had always shown a great interest in the proceedings of the Society, of which he had been some time a member, and had done more for them in the most gratifying way by devoting much of his time to statistical studies and making a proper use of statistics in his published addresses. They felt that it was not desirable in choosing their President to confine themselves to gentlemen who had been most intimately connected with the Society, but that they should be catholic in their choice, looking rather to the general services of public men who identified themselves with statistical pursuits, than to the mere chance of their having been identified with this particular Society. When gentlemen like Mr. Brassey came amongst them, they were consequently most happy to welcome them, and they looked forward to a continuance and increase of the prosperity they had lately enjoyed. In conclusion, he had to thank the Society for the vote they had passed to his colleagues and to himself. If they had any trouble at any time—and the office of Secretary at least was not a sinecure—they had an ample reward in the goodwill and confidence shown to them by the members of so powerful a Society, and in the knowledge that they were promoting a good and useful work.

The CHAIRMAN having moved a vote of thanks to the Scrutineers, the proceedings terminated.

*On the CELTIC LANGUAGES in the BRITISH ISLES; a STATISTICAL SURVEY. By E. G. RAVENSTEIN, Esq., F.R.G.S., &c.**

[Read before the Statistical Society, 15th April, 1879.]

OF all subjects of statistical inquiry, that relating to the nationality of the inhabitants of one and the same State, is one of the most interesting. In some of the great empires of the continent it is of vital importance. Until the beginning of this century, a process of amalgamation and consolidation had been going on in most countries of Europe, the weaker nationalities adopting the languages of their more powerful neighbours. But the spirit of nationality is abroad now. In its name have been carried on some of the most tremendous wars our age has witnessed, and even the smaller national fractions are loudly asserting their existence. The reign of one universal language appears to be more remote than ever before.

It appeared to me that an inquiry into the geographical distribution and numerical strength of the non-English speaking inhabitants of the British Isles might prove of interest to the members of the Statistical Society. Hence this paper. Fortunately, a question of language is not likely in these islands to lead to civil discord or dismemberment. No one dreams of ousting English from the place of vantage it holds, and even though the Irish Home Rulers succeeded in setting up a parliament of their own, its proceedings would have to be carried on in English. Yet, in spite of the comparative insignificance of the Celtic tongues which survive amongst us, this question of race and language abounds in interest. It has been strangely neglected. The census returns for Ireland distinguish between Irish and English speaking inhabitants, but no official notice has ever been taken of the existence of persons in Wales and the Highlands of Scotland able to speak Welsh or Gaelic. Nor, as far as I am aware, has an inquiry of the nature of mine ever been instituted before. The "Statistical Accounts" of Scotland contain a considerable amount of information on the language spoken by the inhabitants, but this information is of a

* Linguistic maps on a larger scale, illustrating this paper, have, by desire of a few gentlemen interested in this question, been published separately. The set includes two maps of Ireland, one of Wales, and one of Scotland. The maps are not sold separately. Copies can be procured from any bookseller, or through Messrs. Trübner. Price 5s.

most fragmentary nature, besides referring to a period now far behind us.

More recently, Mr. James A. H. Murray has traced the linguistic boundary between Gaelic and Lowland Scotch.* His inquiries, however, were confined to the border districts. As to Wales, nothing whatever appears to have been done except that Mr. Walter Davies, in a work published in Welsh, described the linguistic boundary such as it existed about forty years ago. As far as Scotland and Wales are concerned, I mainly rely upon information procured by myself. I sent out no less than 1,200 circulars, addressed to registrars of births, clergymen, schoolmasters, and others, likely to be intimately acquainted with the linguistic condition of their neighbourhood, besides carrying on a voluminous correspondence with gentlemen whom, in the course of my inquiry, I found to take a special interest in the subject I proposed to deal with. I am happy to say that fully one-half of my circulars met with a satisfactory response. Some villages, however, proved singularly obdurate to my appeals; but when the notabilities of the place, appealed to in turn, failed to furnish the information I wanted, I addressed myself as a last resource to the leading inn-keeper, and generally obtained what I required. Of course, the information collected in this manner is not always trustworthy. There may exist a bias in favour of Gaelic or of English, which unconsciously colours all statements made with respect to them. The expressions used by some of my informants are occasionally vague, and in not a few instances authorities disagree as regards the same locality—not indeed as to the continued use of Gaelic or Welsh, but as to the number of persons still able to converse in it. In all these cases I have exercised my judgment to the best of my ability, and I venture to hope that the results now presented will prove, on further inquiry, to be a close approximation to the truth.

Four Celtic languages are at present spoken in the British Isles—three of which belong to the northern, Gaelic or Gadhelic, and one to the southern or Cymraig, branch. The former are Irish Gaelic, Scotch Gaelic, and Manx. The Cymraig branch, since the extinction of Cornish, is now represented only by the Welsh.†

* J. A. H. Murray, *The Dialects of the Southern Counties of Scotland*, with a Linguistic Map. London ("Transactions Philosophical Society," 1873).

† Up to the end of the fifteenth century Cornish was spoken as far as the Tamar. The Reformation led to its extinction, as it also led to the extinction of Celtic in Strathclyde. In 1707 English was spoken throughout Cornwall, but Cornish still survived in twenty-three parishes. In 1791 only one person able to speak Cornish was alive. (See Henry Jenner, in "*Philosophical Society's Transactions*," 1873-74, p. 165.)

Ireland.

I begin my survey with Ireland, chiefly because the census returns enable me to follow the vicissitudes of Irish since 1851, and to place before you, in an authoritative manner, some of the phenomena which attend the lingering death of a language retreating before a more powerful neighbour. I am quite aware that the completeness of the census returns has been questioned. An address prepared by the council of the "Society for the Preservation of the Irish Language,"* asserts that the "figures shown by the last census returns are by no means to be received as the total, as the council are aware that the returns do not include the entire number of people who speak Irish, since it is well known that many persons, for want of education in the vernacular, and of due appreciation of its value, do not admit their knowledge of the language, and that many more who know it were never questioned on the subject at the census taking." No doubt, the figures given in the census are not absolutely correct, more especially as regards persons able to speak a little Irish in addition to English. Upon the whole, however, I believe the census to reflect very fairly the linguistic condition of Ireland. If persons able to speak a little Irish have been omitted, the omissions of those able to speak a little English are in all likelihood more numerous. The experience I acquired in connection with my own circulars shows the difficulty of eliciting a satisfactory reply, even though the queries be formulated with much care. In many cases persons were stated to understand English without being able to speak it, which is quite contrary, I believe, to the experience of those who learn foreign languages from books. The council fails to support its assertion by facts or cogent arguments, and I shall therefore accept the figures as they appear in the census returns.

The time when Irish was the language of the bulk of the population of Ireland is not perhaps so far distant as might be imagined from the limited area it occupies at present. Our map, showing the distribution of the Irish speaking population in 1851, enables us to see at a glance that there were few counties even at so recent a period in which the old language of the country had altogether died out. Were I in a position to construct a similar map for the beginning of the century, most of the districts now covered with a pale tint, to indicate the paucity of Irish speaking Irishmen, would stand forth prominently in the deepest red. The localities where at the present day Irish continues to be the language of the

* To Mr. J. J. MacSweeney, the Secretary of that Society, I am indebted for valuable information.

majority, are remote, their area is comparatively limited, and their population less dense than in the more fertile English speaking districts of the island. Even during the twenty years which elapsed between the censuses of 1851 and 1871 they have shrunk considerably. In the former year they had an area of 9,325 square miles, with 1,328,938 inhabitants, of whom 920,856 or 69·3 per cent. spoke Irish. In 1871 their area was 5,293 square miles, their population 545,658 souls, and the number of persons able to speak Irish only 343,297 or 62·9 per cent. Embracing all baronies and towns in which at least 25 per cent. of the population spoke Irish, we have, in 1851, an area of 15,714 square miles, with 2,471,214 inhabitants, of whom 1,348,768 or 54·6 per cent. spoke Irish; in 1871 an area of 10,529 square miles, with 1,305,977 inhabitants, of whom 644,678 or 49·4 per cent. spoke Irish. A glance at our maps shows that the baronies in which Irish was spoken by between 25 and 50 per cent. of the inhabitants are contiguous to those in which it is the language of the majority, with one remarkable exception. A dark patch will be observed, on the map, for 1851, occupying an area of 289 square miles, in Louth, Armagh and Monaghan, and extending from Carlingford and Dundalk on the Irish Sea, westward to the borders of Cavan. In 1851 this district had 102,185 inhabitants, of whom 27,952 or 27·3 per cent. spoke Irish; in 1871 its population was 87,992, of whom only 9,788 or 11·0 per cent. spoke Irish; and the next census will probably show the Irish language to have become nearly extinct. The Irish population of the baronies bordering upon this last refuge of the Celt in eastern Ireland, is comparatively numerous, and the time is not perhaps very remote, when a band of Irish speaking districts extended thence westward into Sligo and Donegal, thus separating the Scotch and English plantations in Ulster from the territories occupied by Normans and Saxons in Leinster. That band was first broken through in the direction of the great highway which joins Armagh to Monaghan, Clones, Belturbet and Longford.

Before proceeding to a consideration of the great Irish speaking regions of the west, I desire to draw your attention to the baronies of Lower Glenarm and Cary, in north-western Antrim. The Gaelic dialect spoken there is identical with that of Kintyre, in Argyleshire, with which up to the present time a constant intercourse is kept up, but it is dying out rapidly. In 1851 it was still spoken by 2,674 persons, or 9·6 per cent. of the total population, but in 1871 the number speaking it had dwindled down to 301, and by this time it is probably very nearly extinct.

We now turn to the west, where Irish is still the language of a considerable portion, and in many districts even of a majority of the inhabitants.

IRELAND

English Miles

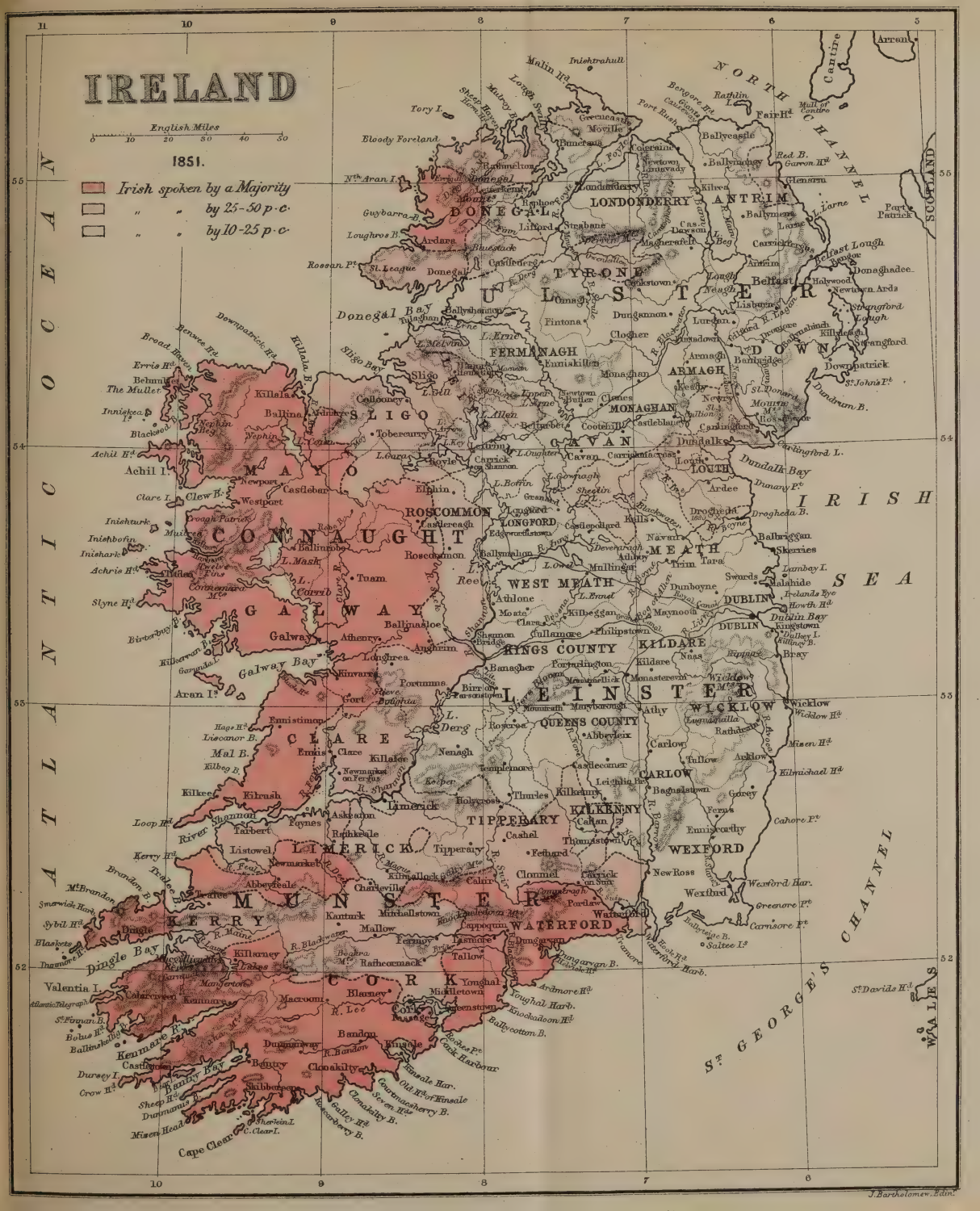
0 10 20 30 40 50

1851.

- Irish spoken by a Majority
- " " by 25-50 p.c.
- " " by 10-25 p.c.

N
56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0

56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0

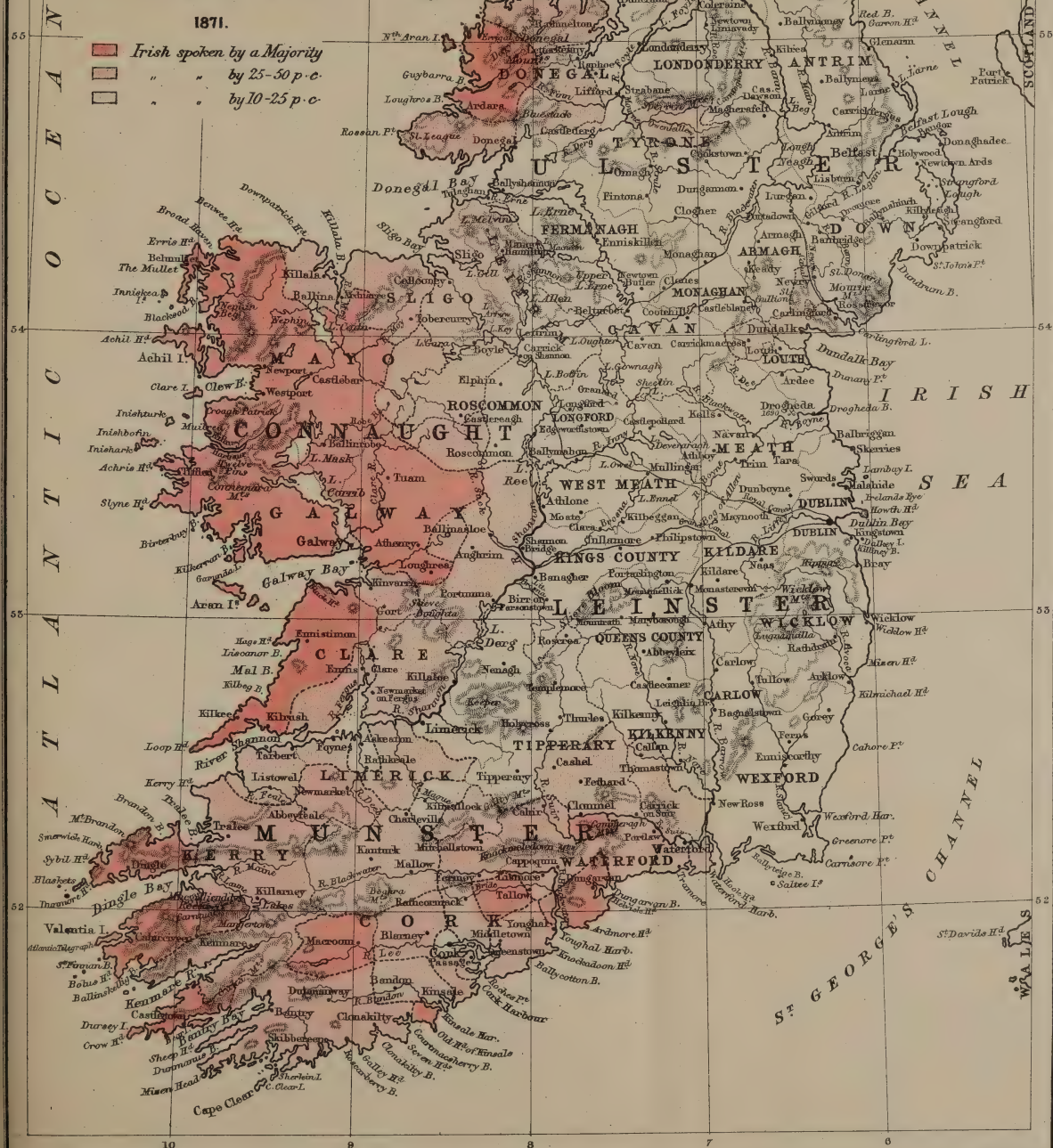


IRELAND

1871.

- Irish spoken by a Majority
- " " by 25-50 p.c.
- " " by 10-25 p.c.

English Miles
0 10 20 30 40 50



The pronounced Irish portion of Donegal embraces the baronies of Kilmacrenan, Boyleagh, and Banagh, lying between Lough Swilly and Donegal Bay; but only in Boyleagh is Irish the language of the majority. Irish maintains its ground there more firmly than in any other part of Ireland, and the proportion of persons able to speak it has actually increased to a slight extent between 1851 and 1871. In the former year 47·4 per cent., in the latter 48·8 per cent. of the population spoke Irish. This relative increase, however, is by no means due to a spread of Irish among persons who originally spoke only English, but rather to the fact of migration and emigration being more frequent amongst persons having a knowledge of English.

The second great Irish district extends from Sligo Bay in the north to the estuary of the Severn in the south. It has shrunk very considerably between 1851 and 1871. In the former year Irish was spoken by at least one-fourth of the inhabitants throughout Sligo, Mayo, Galway, and Clare, only excepting the small barony of Clonmacnowen, in the north-western part of Leitrim, and in a portion of Roscommon. The territory within which the Irish speaking inhabitants were in a majority extended without a break from Killala Bay to the estuary of the Shannon. In 1871, Irish was found to have lost much ground. In 1851 it was spoken by 607,753 persons throughout this district (60·8 per cent. of the population), in 1871 by only 601,120 persons, or 55·6 per cent., being a relative decrease of no less than 8·5 per cent. The most intensely Irish parts of this district were, in 1871, the Aran Islands, Connemara, and Joyce's country, in the county of Galway, and the barony of Erris, in that of Mayo.

The south-western Irish speaking district extended in 1851 from the estuary of the Severn to Waterford and the lower Bann. It included the whole of the counties of Kerry, Cork, and Waterford, with the exception of the cities of Cork and Waterford, as well as western and south-eastern Limerick, southern Tipperary, and southern Kilkenny. The districts in which Irish was the language of the majority included the greater portion of Kerry and the whole of south-western Cork, nearly all Waterford, and portions of adjoining counties. In 1851 Irish was spoken by 655,611 persons, or by 52·5 per cent. of the population, whilst in 1871 only 253,458 persons, or 43·0 per cent. of the population were able to express themselves in it, being a relative decrease of no less than 18·1 per cent. In the former of the two years Irish was the language of a majority in two extensive districts, of which the one embraced nearly all Kerry and the south-western portion of Cork, whilst the other included nearly all Waterford, with some of the neighbouring baronies in Cork, Tipperary, and Limerick. At that time a portion

of Kerry, including the peninsula bounded by Dingle Bay and the Kenmare River, was as intensely Irish as any part of Mayo. In 1871 there remained only eight baronies out of thirty in which Irish was spoken by a majority of the inhabitants, viz., the baronies of Corkaguiney, northern Dunkerran, and Iveragh, in Kelly; the baronies of Bear, West Muskerry, and Kinnatalloon, in Cork, and the baronies of Decies within Drum, and of Glenahiry, on the upper Suir, in Waterford. Numerical details of the distribution of the Irish speaking population are given in Tables I and II, whilst its geographical distribution can be gathered more readily from our maps than from a lengthy description of linguistic boundaries. The general results are presented in the following set of tables:—

1. *Geographical Distribution of the Irish Speaking Population of Ireland.*

	1851.					
	Area. Square Miles.	Proportion per Cent.	Total Population.	Proportion per Cent.	Persons Speaking Irish.	Proportion per Cent.
Districts in which Irish is spoken by a majority	9,325	29	1,328,938	22	920,856	60
Districts in which it is spoken by 25 to 50 per cent	6,389	20	1,142,276	18	427,912	28
Districts in which it is spoken by less than 25 per cent. of the inhabitants	16,817	51	4,103,064	60	175,518	12
Total, Ireland.....	32,531	100	6,574,278	100	1,524,286	100

	1871.					
	Area. Square Miles.	Proportion per Cent.	Total Population.	Proportion per Cent.	Persons Speaking Irish.	Proportion per Cent.
Districts in which Irish is spoken by a majority.....	5,293	16	545,658	10	343,297	42
Districts in which it is spoken by 25 to 50 per cent.....	5,236	14	760,289	14	291,281	37
Districts in which it is spoken by less than 25 per cent. of the inhabitants	22,002	70	4,106,430	76	173,197	21
Total, Ireland.....	32,531	100	5,412,377	100	817,875	100

2. Parts of Counties in which Irish was Spoken by a Majority of the Inhabitants.

	1851.				1871.			
	Area, Square Miles.	Total Population.	Persons Speaking Irish.	Pro- portion per Cent.	Area, Square Miles.	Total Population.	Persons Speaking Irish.	Pro- portion per Cent.
DONEGAL	244	21,642	16,326	75·6	244	21,988	15,931	72·4
WESTERN DISTRICT.								
Mayo	1,907	231,289	158,768	68·6	1,521	163,517	99,980	61·1
Roscommon	128	22,026	11,465	52·1	—	—	—	—
Galway, county	1,933	218,950	175,976	80·4	1,828	153,137	105,597	68·9
„ town	38	34,146	22,855	67·0	—	—	—	—
Clare	668	116,532	89,035	76·4	549	68,559	40,424	58·9
Total	4,674	622,943	458,099	73·5	3,898	385,213	246,001	63·9
SOUTH-WESTERN DISTRICT.								
Cork	1,779	310,328	198,377	63·9	492	52,407	31,988	61·0
Kerry	1,410	150,743	106,476	70·1	577	49,711	37,208	74·9
Limerick	395	73,109	41,455	56·7	—	—	—	—
Tipperary	183	32,823	21,585	65·8	—	—	—	—
Waterford	640	117,350	78,540	69·9	80	36,329	22,269	61·4
Total	4,407	684,353	446,434	65·2	1,149	138,447	91,465	66·1
Grand total	9,325	1,328,938	920,856	—	5,293	545,658	343,297	62·9

3. Parts of Counties in which Irish was Spoken by more than 25, but less than 50 per Cent. of the Inhabitants.

DISTRICT OF DUNDALK.								
Louth	107	39,000	10,612	27·2	—	—	—	—
Armagh	77	31,664	9,229	29·1	—	—	—	—
Monaghan	105	31,521	8,111	25·7	—	—	—	—
Total	289	102,185	27,952	27·3	—	—	—	—
DONEGAL	762	99,572	41,129	41·3	762	84,473	36,028	42·7
WESTERN DISTRICT.								
Leitrim	172	28,561	8,948	31·3	—	—	—	—
Sligo	721	128,515	49,228	38·3	189	48,023	16,156	33·7
Roscommon	545	26,033	11,446	44·0	36	3,388	1,034	30·4
Mayo	224	43,210	21,310	49·3	386	82,513	38,981	47·2
Galway, county	421	54,974	20,761	37·7	204	38,834	18,485	47·6
„ town	—	—	—	—	38	19,843	9,363	47·2
Clare	625	95,908	37,961	39·6	218	32,306	9,241	28·6
Total	2,708	377,201	149,654	39·7	1,071	224,907	93,260	41·5

3. *Parts of Counties in which Irish was Spoken—Contd.*

	1851.				1871.			
	Area, Square Miles.	Total Population.	Persons Speaking Irish.	Pro- portion per Cent.	Area, Square Miles.	Total Population.	Persons Speaking Irish.	Pro- portion per Cent.
SOUTH-WESTERN DISTRICT.								
Limerick	317	61,105	23,547	—	151	21,351	7,178	33·7
Kerry	443	87,511	40,022	—	1,136	123,181	40,173	32·6
Cork	1,107	253,248	97,657	—	1,366	233,611	86,141	36·9
Waterford	77	20,586	8,229	—	567	50,713	20,028	39·5
Tipperary	409	100,202	26,858	—	183	22,053	8,473	38·5
Kilkenny.....	277	40,666	12,864	—	—	—	—	—
Total	2,630	563,318	209,177	—	3,403	450,909	161,993	35·9
Grand total	6,389	1,142,276	427,912	—	5,236	760,389	291,281	38·3

A comparison of the census returns for 1871 with those for 1851 enables us to obtain a very clear notion of the manner in which a language fallen into disuse amongst educated classes dies a lingering death in the face of a more vigorous usurping tongue. In 1851 Irish (or Irish in addition to English) was spoken by 1,524,286 persons, or by 23·3 per cent. of the population; in 1861 it was spoken by 1,105,536 persons (19·1 per cent.); in 1871 by 817,875 persons (15·3 per cent.). The absolute decrease, therefore, amounted to 27·4 per cent. between 1851 and 1861, and to 26·2 per cent. between the latter year and 1871. This almost looks as if Irish were maintaining its ground more firmly than formerly. Such, however, is not the case, for if we take account of the general decrease of the population, we find that between 1851 and 1861 the relative decrease of Irish amounted to 18 per cent. and increased to 21 per cent. for the years 1861-71.

Amongst females Irish loses ground at a slightly more rapid rate than amongst the males. On the other hand, the number of females who in addition to Irish speak also English, is smaller than that of the males similarly circumstanced.* Two agencies,

	1851.	Proportion per Cent. of Total Female or Male Population.	1871.	Proportion per Cent. of Total Female or Male Population.
* Number of females who spoke Irish only	183,538	5·5	60,515	2·2
Number of females who spoke Irish and English	600,702	17·8	349,718	12·6
Number of males who spoke Irish only	136,063	4·2	43,047	1·6
Number of males who spoke Irish and English	603,982	19·0	364,595	13·8

operating in contrary directions, account for this fact. Young Irishwomen who migrate into English speaking districts soon forget their native language, but their sisters, who remain at home, leading a life of greater seclusion than the men, retain it all the more tenaciously. Hence I do not hesitate to say it is woman who will have the last word in Irish, as she had it in Cornish, and is supposed to have it in all tongues.

After what has been stated it cannot be doubted that Irish is on the decrease, but opinions may still differ with respect to the agencies to which this decrease must be ascribed. Some may feel inclined to look to emigration as the main cause, and if they were able to show that the Irish speaking natives of Ireland emigrate in larger numbers than their English speaking countrymen, they would have proved their case. The emigration returns, however, warrant no such conclusion. The number of emigrants sent forth from Connaught and Munster, the two strongholds of the Irish, are not as numerous, proportionately, as those from the English provinces of Leinster and Ulster. I have shown elsewhere* that the local element in the population is strongest in western Ireland, that is, in those parts of the country where Irish most firmly retains its hold upon the people, and that migration sets towards the east, the places of emigrants being occupied by migrants from the west. The children of these migrants forget the language of their parents, and hence it is this migration, and not emigration, which weakens the Irish element. The loss is positive, but it does not affect the intensely Irish districts which sent forth these migrants. In these districts it is the national schools in which only English is taught, which have proved the great extirpators of Irish. The potency of their influence may be judged from the fact that in 1841 only 47 per cent. of all persons five years of age and upwards were able to read, a proportion which in 1871 had been raised to 67 per cent. This influence of English schools joined to the necessity of acquiring a knowledge of English for purposes of business, sufficiently accounts for the decay of Irish even in those parts of the country where it remains to the present day the language of the majority. We may judge of the rate at which Irish is being forgotten by the younger generation from the following tabular statement, which classifies the general and Irish speaking population of Ireland according to ages:—

In 1851 23·3 per cent. of the total female population spoke Irish or Irish and English; in 1871 only 14·8 per cent., being a decrease of 36·5. Amongst males the decrease only amounted to 33·6 per cent.

* “The Birthplaces of the People and the Laws of Migration.” London, 1876. (With seven maps.)

Age.	General Population, Proportion per Cent.		Irish Speaking Population, Proportion per Cent.	
	1851.	1871.	1851.	1871.
Under 10 years	22'2	24'7	11'0	7'4
10 and under 20 years	26'2	22'0	25'0	17'0
20 " 30 "	16'2	14'7	17'4	14'2
30 " 40 "	11'2	11'0	13'6	13'7
40 " 50 "	9'7	8'7	12'8	12'8
50 and upwards	14'5	18'9	20'2	34'9
	100'0	100'0	100'0	100'0

Between 1851 and 1871 the proportionate number of children speaking Irish was diminished to the extent of 33 per cent. And this decrease is by no means confined to districts in which English is the preponderating tongue. In the county of Galway in 1871, 25'9 per cent., or more than one-fourth of the general population consisted of children less than ten years of age, whilst amongst the Irish speaking population their number only amounted to 12'7 per cent. There, too, Irish is being rapidly forgotten, and we can foresee the time when the language will be extinct.

The decrease varies in different parts of the country, and there are even a few baronies in which Irish has relatively increased since 1851. But it would be absurd to conclude from this that Irish is reviving. As might have been expected, the relative decrease is least in those counties which in 1851 had a majority of Irish speaking inhabitants. In Mayo, the most remote of all, it only amounted to 14 per cent., in Galway to 18 per cent., in Waterford to 30 per cent., in Clare to 34 per cent., and in Cork to 36 per cent. This is approximately the order in which these counties would rank with respect to their Irish speaking population. In all these cases the absolute is far in excess of the relative decrease.

One county there is in which the Irish speaking population exhibits a slight relative increase since 1851, although it too exhibits an absolute decrease, like all other counties. This is Donegal. The increase, however, is clearly due to an excess of emigration amongst its English speaking inhabitants.

Amongst the eight baronies which between 1851 and 1871 exhibited a relative increase amongst their Irish speaking inhabitants, there are five in which the Irish speaking decreased at a slower rate than the English speaking population.*

In one barony, Glenahiry, in Waterford, the general population

* These baronies are Tirhugh in Donegal, Callan in Kilkenny, Bear and Cork in Cork, and Loughrea in Galway.

decreased, but the Irish speaking population increased, owing no doubt to immigration from neighbouring baronies. In two baronies, Costello in Mayo, and Kilculliheen, which is virtually a suburb of Waterford, the Irish speaking increased at a more rapid rate than the general population. I do not hesitate to say that in none of the above cases are we justified in assuming that Irish has gained ground among persons who previously did not speak it. The relative or absolute increase of persons speaking Irish is solely due to an excess of English emigration, or to migration of Irish from neighbouring baronies.

Of agencies calculated to encourage the use of the Irish language, there existed none until quite recently. The Government of the country was English, the school was English, and so was the pulpit. But as we have said before, the spirit of nationality is abroad. It has roused a number of Irish gentlemen into activity, and they have founded a "Society for the Preservation of the Irish Language." The Society desires to encourage a familiar use of Irish, to promote the formation of classes for teaching it, to encourage modern Irish literature, and above all to advocate its teaching in the national schools. This latter object has been attained more readily and with less opposition than was anticipated. The commissioners of national education promptly complied with a request that Irish should be placed on the programme of the national schools and on a footing equal to Latin or Greek.* Up to the present time, "even in places where few or none of the adults know a word of English, the language of the national schools, the books, the teaching, &c., are entirely English," and Mr. P. C. Keenan, resident commissioner of national education, is undoubtedly right when, from an educational point of view, he insists upon the desirability of teaching Irish children Irish, and English through its medium.

Thus far the Society's undertakings have been fairly successful. It numbers 293 members, and has local associations in twenty-one towns of Ireland, at Sheffield, Leeds, and Wigan, and in the United States. Irish classes, attended by over a thousand pupils, have been established in connection with thirty-six national schools, and Irish is also taught at numerous colleges. In America, we are told, "thousands are devoting themselves to the study of Gaelic, and classes, consisting of three and four hundred, have been formed in American cities." The elementary books of the Society meet with a ready sale, 26,000 copies of the "First Irish Book," and 12,000 of a "Second Irish Book" having been disposed of since 1877. At the same time we are bound to direct

* A fee of 10s. will be allowed for each pupil who passes in a programme of examination laid down by the commissioners.

attention to the fact that probably not 5,000 persons throughout Ireland are able to read an Irish book, that not a single Irish newspaper is being published, and that the translations of the "Iliad" and Moore's "Melodies," made by the Most Rev. John MacHale, however valuable, are not works published to meet a popular demand. Even the elementary books published by the Society are adapted only for the use of persons acquainted with English.

Time alone can show whether the efforts put forth by the Society are able to stay the decay of the Irish language, but whatever its success—and we sincerely desire to see it successful—the use of English will become more universal from day to day, in proportion as education makes progress. In 1851 there lived in Ireland as many as 319,602 persons (136,063 males, 183,539 females) who had no knowledge of English; in 1871 only 103,562 (43,047 males, 60,515 females), a vast decrease, even though we bear in mind the decrease of the entire population of the country. In most parts of Ireland a traveller would hardly notice that the inhabitants speak anything but English. Only in the more remote western districts would the fact of the existence of a Celtic speaking population force itself upon his attention. Of counties in which more than 1 per cent. of the inhabitants are unable to express themselves more or less fluently in English, there are only eight—Cork, Clare, Kerry, Waterford, Donegal, Galway, Mayo and Sligo. There is not a barony, and probably not a village, in which English is not understood by a majority of the inhabitants. Of districts in which over 15 per cent. of the inhabitants do not know English, there are four, and their entire population, in 1871, only amounted to 160,325 souls. These districts are:—

1. The barony of Boyleagh, in the most remote and sterile portion of Donegal, where 30·1 per cent. do not know English.

2. The barony of Erris, a wild region in the north-western corner of Mayo, where 17·8 per cent. do not speak English.

3. A portion of Western Galway, including the Aran Islands, the most Irish region of all Ireland, in Connaught, Joyce's country, with its famous peasantry, and Connemara to the west of Lough Corrib, and the barony of Clare to the east of that lake. In Joyce's country nearly 40 per cent. do not know English. The vicinity of these intensely Irish baronies has influenced the linguistic features of the town of Galway, where English is less known than in any other town of Ireland, 12·3 per cent. of the population not being able to speak it.

4. The baronies of Dunkerran and Iveragh, in Kerry, between Dingle Bay and Kenmare River, and to the east of the Lakes of Killarney, a district famous for its picturesque scenery, where 18·8 per cent. are unable to express themselves in English.

How widely English is known in Ireland may be gathered from the following table, from which it appears that 87·6 per cent. of the entire population reside in districts to all intents and purposes English, and that the population of these districts is denser than that of those in which Irish still maintains its grounds :—

Districts in which English is Spoken by	Area Square Miles.	Proportion per Cent.	Total Population, 1871.	Proportion per Cent.	Unable to Speak English.	Proportion per Cent.	Inhabitants to a Square Mile.
Over 95 per cent. of all inhabitants	26,794	82·4	4,793,986	87·6	24,002	0·5	175
90 and under 95 per cent. ..	2,712	8·3	338,755	6·3	25,535	7·6	125
85 " 90 " ..	957	2·9	119,311	2·2	15,892	13·3	124
80 " 85 " ..	1,256	3·9	99,422	1·8	17,944	18·1	79
Less than 80	812	2·5	60,903	1·1	20,189	33·1	75
	32,531	100·0	5,412,377	100·0	103,562	1·9	166

In conclusion, I might be expected to say something about the Irish residing outside Ireland in other parts of the British Islands. We learn from the census returns that the natives of Ireland in 1871 numbered 566,540 in England and Wales, 207,770 in Scotland, and 4,328 in Man and the Channel Islands. Including the children of Irish parents, the Irish population of Great Britain probably exceeded 2 millions, but of this vast number very few spoke Irish—probably not 50,000. There are no churches the services of which are conducted in Irish, and the branch associations of the Irish society mentioned above will first have to prove whether they possess the vitality undoubtedly possessed by similar associations existing amongst the Welsh of Lancashire and other parts of England.

The Isle of Man.

In what I say on the Isle of Man, I entrust myself to the guidance of Mr. Henry Jenner, who satisfactorily dealt with the subject a few years ago.* The Manx Gaelic holds a middle place between Irish and Scotch Gaelic, but inclines considerably to the latter. About the beginning of the seventeenth century the wealthier inhabitants adopted the English language and English customs, and towards the end of that century the "gentry were "more willing to discourse in English than in their own "language."† By the beginning of the eighteenth century every parish had its English school, but two-thirds of the inhabitants did not understand English. The decline of Manx has been rapid

* The Manx Language, "Transactions Philological Society," 1875, p. 172 (with map).

† Camden's "Britannia" (1695).

since the beginning of the nineteenth century, and the only parish church in which a Manx sermon can now be heard is that of Kirk Arbory in the south-western part of the island. The Wesleyans, however, occasionally use Manx in their religious services.

The island in 1871 had 54,042 inhabitants, of whom 190 spoke only Manx and 13,600 Manx and English.* That is to say, 25·6 per cent. of the population still understood Manx. There are four parishes in which Manx is spoken by a majority. Three of these (Bride, Lizayre and Jurby) are in the north of the island; one (Arbory) is in the south-west. These four parishes have an area of 65 square miles and 5,518 inhabitants, of whom 4,263 or 77·5 per cent. speak Manx. The chief strongholds of Manx at the present day are the valleys diverging from the Snaefell and Pen-y-Pot, in the centre of the northern part of the island; portions of Kirk Bride and Kirk Andrews, in the extreme north-west; Dalby, in the parish of Kirk Patrick, on the western slope of the island; and Cregneesh, near its extreme southern point. In the parishes of Santon, Marown and German, which stretch across the southern part of the island, very little but English is heard.

Scotland.

The traditional Highland boundary of 1745 commenced at Dumbarton and swept thence to the town of Nairn, passing through Doune, Crieff, Little Dunkeld, Blairgowrie, Western Forfarshire, Upper Aberdeenshire, Tomintoul and Inveravon. I shall show that the actual limit of the Highland districts in which Gaelic remains the language of the majority lies in many localities far to the north or west of that old line, whilst in others it still coincides, and in a few instances even overlaps it. The linguistic boundary which Mr. Murray laid down in 1870† included all districts in which Gaelic was then spoken by any of the natives, regardless of the fact that English might have been the language of the majority of the people. My line will only include those districts in which Gaelic continues the language of the majority, and the differences between it and that laid down by Mr. Murray, which in some instances are very considerable, are therefore not ascribable to a rapid decay of Gaelic during the short interval which has elapsed since he instituted his inquiries.

The districts to which I shall have frequent occasions to refer are registrar's districts, which coincide in most instances, but not in all, with the parishes. My counties, however, are counties proper and not registration counties.

* I make an estimate for the town of Douglas, which Mr. Jenner excluded from his account.

† "Philological Society's Transactions," 1873.

SCOTLAND

English Miles

0 10 20 30 40 50



Gaelic spoken by a Majority
 " " by 25-50 p.c.

IRISH SEA

ENGLAND

CAITHNESS is English in its north-eastern portion, Gaelic in its south-western. About 1834 Gaelic was spoken generally throughout Latheron, less so in Falkirk, and it retained some hold upon Reay. At the present day it may almost be said to have disappeared from Reay, is spoken by no more than 37 per cent. of the inhabitants of Falkirk, but maintains its grounds in Latheron, to some extent through Highland immigration. Mr. Murray draws his linguistic boundary along the water of Forss, to the west of Thurso, through Falkirk, and thence to Bruan Head, near Lybster on the east coast. I am inclined to think that a line beginning at a point on the Sutherland boundary, five miles from the coast, and running thence nearly directly to Lybster, will be found to include all those districts where Gaelic is spoken by a majority. In former times the burn of East Clyth marked the linguistic boundary on the east coast, but English now predominates far to the south of it, more especially near the coast. Outside the line indicated by me Gaelic is spoken only by a few old people and by immigrants whose children, however, never acquire it. There are no Gaelic schools in Caithness, but Gaelic services are held in four or five churches. The language, nevertheless, dies but slowly, more especially in Latheron. English is spoken by all.*

SUTHERLAND is Gaelic throughout, with the exception of the lower part of Strath Halladale, in the parish of Reay, where English has gained the upper hand. The number of persons able to speak Gaelic varies between 70 and 100 per cent. in different districts, and is highest in the interior and along the north and west coasts. Along the east coast much English is spoken, and Gaelic is said in a few instances to lose ground. In the streets of Helmsdale, for instance, little but English is heard now, which also preponderates in all public affairs at Golspie. There are very few schools in which Gaelic is taught, but in religious services it maintains its ground, and where it has been discarded by the Established Church, it is still cherished by the Free Kirk. There is certainly no parish or village in which Gaelic may not be heard from the pulpit. Amongst the persons speaking only English are many sheep farmers and their shepherds, who immigrated from the south. Their children, in many instances, are said to learn Gaelic.

ROSS AND CROMARTY may be conveniently considered under three heads, the statistics for which are as follows :—

* My returns are as follows :—Reay (including Sutherland portion), 2,331 inhabitants, of whom 12 speak Gaelic only, and 500 Gaelic and English. Falkirk, 2,664 inhabitants, of whom 1,000 speak Gaelic. Latheron, 7,400 inhabitants, of whom 6,600 speak Gaelic.

	Population.	Persons able to Speak Gaelic only.	Persons able to Speak Gaelic and English.	Proportion per Cent. Speaking Gaelic.
English District or Black Isle	5,449	—	190	3·5
Remainder of Eastern Watershed	34,935	1,870	24,240	74·9
Western Coast	17,088	4,900	11,580	97·0
Lewis Island.....	23,483	4,480	14,840	82·2
Total	80,955	11,350	50,850	76·9

The three English districts of Black Isle include Cromarty, Rosemarkie, and Avoch, which are said to have been settled in the days of James VI by people from the south. The Gaelic element there is represented by immigrants, for whose accommodation a few Gaelic services are held.

In the remainder of the eastern slope of Ross-shire, Gaelic is more or less quickly losing ground. My summarised statistics show this, no less than the information which I have obtained for particular districts. In the town of Dingwall a minority only speak Gaelic (700 out of a population of 2,125), and the children of Gaelic parents do not as a rule acquire their mother-tongue. In the village of Evanton, lower down on the Cromarty Firth, the Gaels are likewise in a minority, and so they are in the district of Knockbairn (2,155 inhabitants, 900 Gaels), which adjoins the English district of Avoch. In fact, all along the coast Gaelic appears to have lost ground fast, except in Tarbert, where 2,000 out of a population of 2,182 still speak it. In the district of Tain, where about the year 1831 it was spoken by nearly 99 per cent. of the inhabitants, it is spoken now by only 84·4 per cent.* Further away from the coast Gaelic is more universal, and is said to maintain its ground. In churches its use is still general throughout, but it is not taught in a single school, as far as I know.

Far different along the west coast. There Gaelic is almost unanimously declared to maintain its ground, and even the children of English immigrants, of whom there is a considerable number, are said to acquire and to prefer it. Gaelic is not only the language of the Church, it is also taught in many of the schools. In Lochbroom, however, where many southern farmers have settled, and which is much frequented by sportsmen, it is said to die. But even there it is spoken by 92 per cent. of the inhabitants.

* In 1831 the district had 3,078 inhabitants, of whom 162 spoke Gaelic, 2,881 Gaelic and English. My own information tells me that now, out of 3,221 inhabitants 600 speak Gaelic, 2,100 Gaelic and English. Of course immigration has influenced these proportions. Amongst the young Gaelic is said to be dying fast.

In Lewis, Gaelic is spoken by a vast majority, and the proportion would be higher even than along the west coast if it were not for the town of Stornoway, where two-thirds of the inhabitants are said to "have" no Gaelic. Landward it maintains its ground, and is taught in some of the schools, thirteen of which, attended by 650 children, are supported by the Gaelic School Society at Edinburgh. In the interior of the island English sermons are delivered only occasionally.

INVERNESS-SHIRE I propose to deal with according to its geographical regions, as in the case of the preceding county. The statistics for these are as follows:—

	Population.	Persons able to Speak Gaelic only.	Persons able to Speak Gaelic and English.	Proportion per Cent. of Persons able to Speak Gaelic.
Beaully Basin	6,877	760	5,700	93·9
Inverness and Loch Ness	27,641	790	14,810	56·5
Strath Nairn	2,778	100	2,050	77·3
Strath Dearn	980	20	960	100·0
Strath Spey and Badenoch.....	7,557	1,870	5,550	98·1
South-western Slope	7,292	2,200	3,960	84·5
Skye	18,151	7,980	9,950	98·8
Other Hebrides	16,255	10,800	5,400	99·7
Total	87,531	24,520	48,380	83·3

The basin of the Beaully is still thoroughly Gaelic, except, perhaps, in the village of Beaully at its mouth; but Gaelic, as elsewhere, is said to be coming into disfavour with the younger generation.

The second region exhibits a high proportion of persons not able to speak Gaelic, but this is due entirely to the existence of the large and prosperous city of Inverness, the capital of the Gaelic Highlands, although Gaelic is understood only by a minority, and Gaelic religious services are not much in vogue. The immediate environs, however, are inhabited by Gaelic speaking men, and so is the neighbouring district of Petty, but not that of Ardersier, at the entrance of the loch, which is almost wholly English.* The existence of Fort George within it accounts for this fact. The interior of the county is almost wholly Gaelic, but English, nevertheless, preponderates at a few spots in Glenmore, much frequented by tourists; and in all places which have some contact with the outer world English is given the preference by the young. Gaelic is taught in a few schools, and is used in most religious services.

* Ardersier, 1,284 inhabitants (6 Gaelic, 56 Gaelic and English).

Straths Nairn and Dearn, at the back of the county of Nairn, are still wholly Gaelic, but a knowledge of English is very universal, and the children are said to talk it better than their mother tongue.

In Strath Spey and Badenoch Gaelic is still spoken by a vast majority; but it is stated to lose ground slowly. There are a few schools in which it is taught to a limited extent, and most religious services are conducted in it. The proportion of Gaelic speaking inhabitants here varies between 95 and 100 per cent.; but even in the latter case I am told that children prefer to talk English.

In that portion of the south-western slope of the county which debouches upon Loch Eil and adjoins Fort William, a good deal of English is spoken, though mainly by English shepherds on the large farms, and Gaelic is said to lose ground "slowly." In Glenelg, however, on the open Atlantic, Gaelic, as along nearly the whole of the west coast, maintains its ground. In the schools it is employed merely to explain the meaning of English words.

In the Isle of Skye nearly everybody speaks Gaelic, but English gains "slowly but surely." A few Gaelic schools still exist there. There are thousands who do not know English.

The Western Hebrides, finally, are the great stronghold of the Gaels, and there, rather than in the recesses of the Highlands, will Gaelic linger longest. About two-thirds of the inhabitants do not understand English, and even the children of immigrants acquire Gaelic. Nevertheless, instruction in most schools is carried on in English, to the utter neglect of Gaelic, and in the end English must prevail.

ELGIN has still Gaelic speaking natives, but the language is rapidly becoming extinct. A line drawn from the knock of Brae Moray to the Spey, below Cromdale, and thence to the watershed between the Spey and the Avon, embraces a district of 57 square miles, with about 3,000 inhabitants, of whom a majority speak Gaelic. In Inverallan,* as well as in Cromdale, it is only the adults who speak Gaelic. The children do not learn it, and its use is "strictly prohibited in the schools," although still employed in religious services. Gaelic is therefore sure to die out at an early date. Outside the boundary indicated Gaelic is only spoken by immigrants. About seventy years ago it was common in Knockando; now it is never heard there. In Dallas, too, it is now quite extinct. In the town of Forres it is spoken by 25 to 30 immigrants from the north.

* Inverallan, 2,522 inhabitants, of whom 1 speaks Gaelic only, and 60 per cent. Gaelic and English. Cromdale, with Alvie, 1,295 inhabitants, of whom 5 speak Gaelic, 430 Gaelic and English, 860 English. No Gaelic is spoken in Alvie.

IN BANFFSHIRE Gaelic is still spoken by a majority in the upper Strath Avon, above the village of Tomintoul; but although that district has an area of 90 square miles, its sparse population numbers less than 300 souls. In the village English is spoken by a majority, but in the glens Gaelic still lingers. Lower down, in Kirkmichael, a considerable number of the older people know Gaelic. In the neighbouring Glen Livet, only 12 persons out of a population of 1,796 souls are reported to speak Gaelic. The children only speak English, and although Gaelic services are still continued at Kirkmichael, no Gaelic whatever is taught in the schools.*

NAIRN still possesses a majority of Gaelic inhabitants in the district of Cawdor and Croy, and in the more inaccessible parts of the country bordering upon Inverness-shire. In Cawdor, Gaelic is still spoken by all the older inhabitants, more especially in the south, where it decidedly preponderates. It is no longer taught in the schools, but still employed in divine service. In Ardelach it is spoken by a small majority of probably not over 200 of the older inhabitants. It is not taught in the schools, but is still employed in a short weekly closing service in the Free Church, attended by a congregation of from twenty to forty persons. It is gradually dying out in this district, and there are very few cases of a native under 30 years of age in which it has been acquired from parental example. The linguistic boundary encompasses the districts of Croy and Cawdor, crosses the Findhorn above the bridge of Dulsie, and runs thence in the direction of the Knock of Brae Moray. All within that line is still Gaelic, all beyond it decidedly English. In the town of Nairn, with reference to which James I is reported to have boasted in the presence of a foreign ambassador, that he had a city in his dominions so large that the people at one end did not understand the language spoken by those at the other, Gaelic is still spoken by about 200 persons, but they are all of them immigrants. Gaelic is gradually dying out, excepting in the more remote parts of the county towards the south-west, though immigrants from the west will prevent its total abolition for a considerable period. "These immigrants acquire English "with wonderful rapidity, and even at times attempt to pass in the "community as Saxons pure and simple."

In that detached portion of Nairn which lies within the borders of Ross, close to Dingwall, Gaelic is spoken by a vast majority. The statistics of the county are as follows:—

* Kirkmichael, 477 inhabitants, of whom 2 speak Gaelic, 230 Gaelic and English. Tomintoul, 799 inhabitants, of whom 2 females speak Gaelic and half of the remainder Gaelic and English.

	Square Miles.	Inhabitants.	Able to Speak Gaelic only.	Able to Speak Gaelic and English.	Proportion per Cent. able to Speak Gaelic.
Main portion { Gaelic	80	2,166	20	1,100	41·6
{ English	128	5,951	—	320	5·5
Detached portion in Ross	7	1,108	80	920	91·0
Total	215	10,225	100	2,340	23·9

In ABERDEENSHIRE Gaelic is now heard only in some of the more remote glens of the upper Dee. In Glengairn and in the country about Micras, near Crathie, about 60 old people still use it—not a tithe of the inhabitants. In Crathie and Braemar it is spoken in everyday life in the remote glens, and by a few of the old people in the valley, in their intercourse with the glensmen. All, or nearly all speak English, and Gaelic services have been discontinued since 1843. In Strathdon Gaelic lingered until a few years ago, but is now quite extinct. In Glenbucket it has not been used for years.*

In FORFARSHIRE Gaelic is spoken only in a very small district, namely, in Blacklunans, which to the south of Mount Blair projects into Perthshire, and geographically belongs to Glenshee. The names of many people, no less than the geographical nomenclature, point to a great extent of Gaelic in a former age, but Gaelic preaching has been discontinued for generations, except at Dundee, where services are held for the convenience of immigrant highlanders.

In PERTHSHIRE the Gaels occupy by far the greater proportion of the area, but being very thinly sown, they are as one to five to their English speaking countrymen. The city of Perth alone has more inhabitants than all the highlands of Perthshire together. There are few counties in which the highland element, though still very strong in many districts, appears to lose ground as fast as in Perthshire. Even from remote valleys my query as to whether it maintains its ground has been answered in nearly every instance in the negative. This decay is mainly due to the construction of railways, which facilitate the visits of tourists and sportsmen. Besides this, for a considerable number of years, graziers from Ayrshire and Lanarkshire have leased large holdings in the Highlands, bringing with them their Saxon servants. Whilst these strangers made themselves at home in the county, the natives, expelled from their small holdings, went forth to seek their fortune elsewhere. Gaelic

* Crathie and Braemar, 1,566 inhabitants, of whom 20 speak Gaelic, 500 Gaelic and English.

does not appear to be taught in a single school, even in districts where 99 per cent. of the inhabitants still speak it, and its employment in divine service is of the most limited nature.

The linguistic boundary begins at the Bald Head on the Forfarshire boundary, runs west to the junction of Glenshee with Strath Ardle, intersects Cluny forest, crosses the Tay to the north of Dunkeld, sweeps round on the west to the top of Birnam Hill, then follows the range of hills which bounds Strath Bran on the south, crosses Glen Almond above Newtown, and follows the watershed to Lochearn Head. It then runs south to Callander, and following the southern watershed of Lochs Vennachar and Katrine, passes on to the boundary of Stirlingshire. Within that boundary Gaelic is spoken by 87 per cent. of the inhabitants, but there are hardly a thousand persons who do not also speak English. Outside of it are a few districts in which Gaelic is spoken by more than a fourth of the inhabitants. One of these includes Dunkeld and its immediate vicinity; another extends over portions of the districts of Comrie, Kilmadock (Doune), Port of Menteith, and Aberfoyle. The western boundary of this latter district begins at the head of Glen Turret, crosses the lower Glen Lednock, passes through St. Fillans on Loch Earn, runs across the lower Glen Artney, follows the hills beyond and the Braes of Doune into the valley of the Teith, which river it crosses about half way between Callander and Doune, and runs through the Loch of Menteith to Gartmore on the Stirlingshire frontier. Incidentally I may remark that this boundary coincides in a remarkable manner with the line which on Geikie's capital geological map separates the old red sandstone from the Silurian rocks.

We will now consider the Perthshire Highlands and border parishes somewhat in detail. In that portion of Stormont which has Blairgowrie for its chief town, Gaelic is spoken only by a few old people, nearly all of whom are immigrants. At Blairgowrie itself they number about one hundred. Even in Alyth, where much Gaelic was spoken in the beginning of the century, it is now quite extinct.* On reaching the junction of Glenshee and Strath Ardle we find ourselves in a Gaelic region, but in one where Gaelic has been banished from the schools, and is used only at an occasional communion service in the parish church of Kirkmichael.† In Glenshee, which borders upon the English county of Forfarshire, Gaelic is far less used than in the neighbouring valleys, and in both it is spoken in a corrupt form.

* The districts of Alyth, Rattray, Kinlock, and Lethenty, Clunie and Blairgowrie, have 11,611 inhabitants, of whom about 200 speak Gaelic.

† Persie and Kirkmichael have 1,718 inhabitants, of whom 20 speak Gaelic, 1,415 Gaelic and English.

Ascending the river Tay, from Perth, where a Gaelic service is held once a month for the benefit of about 200 Highlanders, we cross the Gaelic boundary on approaching Dunkeld, where the language, however, is but rarely heard in public. In Strath Bran, which debouches upon the Tay on the left, Gaelic is spoken by a majority, and so it is higher up on the Tay, in Dowally. Logierait, at the junction of the Tay and the Tummel, is thoroughly Gaelic. It is a parish of small agricultural holdings, with Highland tenants, who have lived there undisturbed from generation to generation.* Proceeding still higher up the Tay the influence of southern graziers and sportsmen makes itself felt. In Aberfeldy the Saxons are more numerous still, and in Kenmore, celebrated for its shootings, one-fourth of the population is unable to converse in Gaelic. Beyond Loch Tay we enter Killin and Strath Fillan, where Gaelic speech is as widely known as in the more remote parts of Sutherland, though there is not an inhabitant who cannot make himself understood in English. This is the only part of Perthshire with respect to which I am unreservedly told that Gaelic maintains its ground.

In Blair Athol, in Glen Ranoch, and other districts of this north-western portion of Perthshire, there are but few persons unacquainted with Gaelic.†

In the border districts of Auchtergaven, Moneydie and Monzie, Crieff and Monzievaird, the two latter on the river Earn, Gaelic, excepting in the upper Glen Almond, is spoken only by Highland immigrants, whose children never acquire it.

At Comrie, higher up on the Earn, scarcely anything but English is spoken, and Gaelic services were discontinued about fifteen years ago. But higher still, around Loch Earn, and in Glens Lednock and Artney, the older people still speak Gaelic, and occasional services are held at St. Fillans for their convenience. "In a few years," so one of my correspondents writes, "Gaelic will not be spoken here, and the sooner it disappears the better for the poor Highlanders." I may add that the "Statistical Account," published about 1834, states that forty years before that time the attendance at the English services held at Comrie was limited, whilst then (that is in 1834) hardly a fourth of the people attended them. Even now the basin of the Earn has practically ceased to belong to the "Highlands."‡

* The Duke of Athole is landlord.

† Dunkeld, 881 inhabitants (220 Gaelic and English); Dowally, 461 inhabitants (350 Gaelic and English); Logierait, 1,739 inhabitants (3 Gaelic, 1,680 Gaelic and English); Aberfeldy, 2,286 inhabitants (286 Gaelic, 1,714 Gaelic and English); Kenmore, 1,215 inhabitants (250 Gaelic, 660 Gaelic and English).

‡ Comrie district, 1,911 inhabitants, of whom 130 speak English and Gaelic.

A similar fate threatens the basin of the Teith. In the western part of Kilmadock (Doune), a few old people speak Gaelic, but the children know nothing of it. Callander, and the beautiful lacustrine valley, thence branching off towards the Trossachs, still remain in the possession of the Gael, but there too the old tongue is being forgotten. It is no longer taught in school, and only occasionally employed in divine service.* Higher up, however, in Strath Ire and Balquhiddy, Gaelic continues the language of the vast majority.

In the upper basin of the Forth, in the districts of Port of Menteith and Aberfoyle, Gaelic is still spoken, but by a minority, whilst about 1724 its use was general. Young people are rather "ashamed now of their mother-tongue in the presence of English speaking persons."†

In the ninth century Gaelic was spoken throughout what is now known as Perthshire, as far as the Sidlaws and Ochils, the Saxons being confined to a narrow strip along the coast. In the course of ten centuries its boundary has receded 15 miles. With our schools, our railways, our sportsmen, tourists, and grazier farmers, how many centuries shall elapse before Gaelic, in Perthshire, shall be a thing of the past?

In STIRLINGSHIRE there is but one district in which Gaelic is still heard, viz., that of Buchanan, which stretches along the eastern shore of Loch Lomond. A few heads of families speak Gaelic between the pass of Balmaha and Rowardenan. To the north of the latter, in the direction of Loch Katrine, the use of Gaelic is more general, but it is gradually being forgotten. A line drawn eastward from Rowardenan would probably bound the only corner of Stirlingshire in which Gaelic is still spoken by a majority. But even there it has ceased since 1868 to be the language of the school or of the Church.‡

In DUMBARTONSHIRE the only district in which Gaelic survives among the natives of the soil is Arrochar, to the east of Loch Lomond. Glen Douglas separates it from Luss, where a hundred and fifty years ago Gaelic was as common as English, but where the former is now only spoken by a few of the oldest and by immigrant shepherds, some thirty in all. In Arrochar§ one half do not speak Gaelic, and in half a century it will probably be extinct, except it be kept alive by immigration. In other parts of Dumbartonshire Gaelic is understood by numerous immigrants, of

* Callander has 1,370 inhabitants, of whom 2 speak Gaelic, 1,068 Gaelic and English.

† Aberfoyle, 432 inhabitants, 3 Gaelic, 140 Gaelic and English.

‡ Buchanan, 591 inhabitants, of whom 100 speak Gaelic.

§ Arrochar, 525 inhabitants, of whom one-half speak Gaelic and English.

whom there are 500 in the district of Bonhill (9,593 inhabitants), and several hundred in Dumbarton.

ARGYLESIRE presents perhaps more variety in the numerical proportions of its Gaelic speaking inhabitants than any other county of Scotland. No county has lost so many of its native inhabitants through emigration; no other, Bute perhaps excepted, has received so many Lowlanders of Saxon speech in return. Thus, though the proportion of Gaelic speaking persons throughout the county amounts to 82 per cent., there are two districts, and one of them a very populous one, where English is the speech of the majority in every-day life, and others, in which the Gaels barely exceed a majority, and are not likely to retain it for many years to come. The following are the proportions for the principal divisions of the county:—

	Population.	Persons able to Speak Gaelic only.	Persons able to Speak Gaelic and English.	Proportion per Cent. of Persons Speaking Gaelic.
Cowal	11,523	200	4,930	44·7
Knapdale	7,638	860	6,870	91·2
Kintyre	13,067	70	8,250	64·0
Argyle	4,918	100	3,800	79·6
Lorn, &c.	20,516	6,200	13,500	96·1
Islands	18,017	2,910	14,210	95·1
Total	75,679	10,340	51,560	81·8

The low proportion of Gaelic speaking inhabitants is due to the existence of a small but populous district, embracing 20 square miles and 6,070 inhabitants, within which the number of English speaking immigrants is exceptionally large. This district extends along the eastern coast of Cowal, from Kilmun to Castle Toward; Dunoon, the largest town of Argyleshire, lies within it. It has 3,756 inhabitants, of whom 50 speak Gaelic, and 250 Gaelic and English. Gaelic services are still held regularly in one church, and occasionally in two others, but the children born in the place hardly ever learn Gaelic. Sandbanks (620 inhabitants), close by, has 150 Gaelic speaking inhabitants. The number of Saxon immigrants is considerable. At Inellan (605 inhabitants) Gaelic is spoken only by 50 people. Toward, further south, is quite English. In the remainder of Cowal the Gaels are in a majority, but taking into account the universal use made of English, their majority is decisive only in the remote district of Kilfinan, where they constitute 99 per cent. of the population, and where there exists even a desire to have Gaelic introduced into the schools. In Lochgoilhead and Strachur, which form the neck of the peninsula, Gaelic is

spoken only by about 60 per cent., but in Inverchaolain, in the south, and opposite to Bute island, it is spoken by 73 per cent. Gaelic is used in the churches, but as far as I can make out it is not taught in schools, and there are not consequently many persons who can read it. It is generally reported to lose ground. English is understood by nearly all.

Knapdale is still thoroughly Gaelic, but there, too, English is stated to gain ground in the villages. Gaelic is taught in several schools, and is generally employed in the churches.

Kintyre is nearly as Gaelic as its northern neighbour, Knapdale, except in the extreme south, where Campbelltown and the district of Southend add largely to the Saxon element. In the latter only 90 out of 1,044 inhabitants speak Gaelic, most of these living towards the north-west. Many of the ancestors of the present inhabitants were Lowlanders, who came over after the battle of Dunaverty, in 1647. In Campbelltown, to the best of my belief, nearly one-half of the inhabitants speak only English. In the remainder of Kintyre Gaelic is taught in several schools; the statements as to its losing ground are conflicting.

In Argyle Saxon speech has made considerable progress, not only at Inveraray Village, but also lower down on Loch Tyne, in the district of Cumlodden, where lowland labourers quarry granite. Gaelic is said to maintain its ground, especially in the interior of the country, and there are a few classes in which it is taught.*

Further north, in Lorn, Appin, Glencoe, Morvern, and Ardnachurchan, Gaelic continues the language of the vast majority. In Oban, which next to Campbelltown and Dunoon, is the most populous town of the county, the services at four churches are in Gaelic and English, those at three in English only; Gaelic is spoken in all the shops except in five, and taught in one school.† A good deal of English is spoken towards the head of Loch Eil. Gaelic certainly maintains its ground there, but not in southern Lorn. In some of the more remote parts English appears to be known very little.‡

On the islands, of course, Gaelic still holds its own, and the further away they are from the coast, the firmer appears to be the hold which that language has upon the inhabitants. "It is in no

* In Glassary, 1,535 inhabitants, there are said to be only 34 persons who do not know Gaelic. In Cumlodden (826 inhabitants), on the other hand, 226 speak only English.

† Oban, with district, 3,402 inhabitants, of whom only 300 know no Gaelic.

‡ In the district of Ballahulish and Glencoe, now 2,210 inhabitants, only 210 persons are said to be able to speak English, although that language is taught in the schools. This, no doubt, would be an extreme case, but I fancy my informant has been rather rigid as to linguistic requirements.

"danger of being forgotten," one of my correspondents writes triumphantly, and is taught in many schools.

In BUTESHIRE, as in Argyleshire, immigration is far in excess of the increase of the native element of the population, and if it were not for the fact that many of the immigrants are Gaelic speaking Argyleshire men, Gaelic, on the Isle of Bute, would have become extinct long ere this.

In Rothesay town about 900 persons speak Gaelic, out of a total population of 7,800 souls, and Gaelic is preached in two churches out of ten. In the northern half of the Island of Bute, Gaelic is still the language of the majority, owing, no doubt, to immigration. In the south (Kingarth) it is spoken by 25 per cent., the older people. The younger learn a few phrases when domiciled with Gaels, otherwise Gaelic provokes a smile.*

In Arran Island Gaelic is still spoken by over nine-tenths of the population. It is not taught "to any appreciable extent" in the schools, but employed in one-half of all religious services. "Although struggling hard for recognition, it is losing ground. "It was the language of the playground not many years ago, while "now it is a rare thing to hear a Gaelic word. Old people, when "speaking Gaelic, have often to draw largely on their English "vocabulary to help out their narration."

The Cumbraes are English entirely.

The details for the county are as follows:—

	Area Square Miles.	Population.	Persons able to Speak Gaelic.	Persons able to Speak Gaelic and English.	Proportion per Cent. of Persons able to Speak Gaelic.
Bute	46	10,094	150	1,680	18·3
Arran	162	5,259	—	4,800	91·3
Cumraes	7	1,613	—	—	—
	—	16,966	150	6,480	39·1

It now remains for me to determine the number of Gaelic speaking Highlanders who reside in parts of Scotland which have not yet come under our notice. This I can do approximately by a comparison of the results obtained above with the number of natives born in each county. It results from this, that the number of Gaelic Highlanders is 301,000, and as 266,953 are included in the counties noticed, there remain about 34,000 for the remainder of

* According to Mr. Murray not 10 of the native farmers can speak Gaelic, and the Gaelic population is almost entirely immigrant. This, to judge from the information I received from the island, is an exaggeration.

Scotland.* Of course, many of these Gaels speak their native tongue only on rare occasions, but where they reside in larger bodies, as at Edinburgh and Glasgow, they find churches in which the services are conducted in Gaelic.

I now append a series of tables similar to those which I have prepared for Ireland, referring to the Appendix (p. 635) for a table giving the details for each county:—

1. *Geographical Distribution of the Gaelic Speaking Population of Scotland.*

	Area, Square Miles.	Pro- portion per Cent.	Total Population.	Pro- portion per Cent.	Persons Speaking Gaelic.	Pro- portion per Cent.
Districts in which Gaelic is spoken by a majority	15,571	50·3	268,496	8·0	242,207	80·7
Districts in which it is spoken by 25 to 50 per cent.	427	1·4	36,536	1·1	12,954	4·3
Districts in which it is spoken by less than 25 per cent. of the inhabitants	14,833	48·3	3,054,986	90·9	45,792	15·0
Total, Scotland.....	30,831	100·0	3,360,018	100·0	300,953	100·0

2. *Parts of Counties in which Gaelic is Spoken by a Majority of the Inhabitants.*

	Area, Square Miles.	Total Popula- tion.	Persons Speaking Gaelic.	Proportion per Cent.	Persons able to Speak English.	Pro- portion per Cent.
Caithness	343	8,350	7,180	86·0	8,350	100·0
Sutherland	1,870	23,717	21,612	91·2	22,365	94·4
Ross and Cromarty	3,198	68,175	59,360	87·0	57,125	85·8
Inverness	4,246	71,736	68,288	95·2	47,272	65·9
Nairn	95	3,274	2,120	64·8	3,174	96·2
Elgin	64	3,000	1,906	63·3	2,994	99·9
Banff	87	300	283	94·3	297	99·0
Forfar	4	140	100	71·4	140	100·0
Perth	2,080	20,600	18,070	87·7	19,580	95·1
Stirling	38	150	80	53·3	150	100·0
Dumbarton	45	525	263	50·0	525	100·0
Argyle	3,321	61,877	57,840	93·4	51,607	83·3
Bute	180	6,652	5,105	76·8	6,602	99·3
Total	15,571	268,476	242,207	90·2	220,181	82·0

* That is of Scotland exclusive of Aberdeen, Forfar, the whole of Perth, Stirling and Dumbarton, for the whole of which counties I have roughly estimated the Gaelic population, and inserted the numbers in my tables.

3. *Parts of Countries in which Gaelic is Spoken by more than 25, but less than 50 per Cent. of the Inhabitants.*

	Area, Square Miles.	Total Popula- tion.	Persons Speaking Gaelic.	Proportion per Cent.	Persons able to Speak English.	Pro- portion per Cent.
Sutherland	16	600	150	25·0	600	—
Ross and Cromarty	23	7,331	2,650	36·3	7,031	100·0
Inverness (Inverness town).....	2	14,510	4,550	31·4	14,460	99·7
Banff	32	976	349	35·6	974	100·0
Aberdeen	165	1,500	520	34·6	1,480	98·6
Perth	160	4,030	1,210	30·2	4,030	100·0
Argyle (Campbelltown)	2	6,688	3,300	49·3	6,688	100·0
Bute	27	901	225	25·0	901	100·0
Total	427	36,536	12,954	35·5	36,164	99·0

It appears from our tables that not quite 9 per cent. of the total population of Scotland is able to speak Gaelic, and that eight-tenths of these are distributed over nearly half the area of the country where they are in the majority. Thus, whilst in the Saxon districts there are as many as 206 inhabitants to the square mile, in the Gaelic Highlands there are only 17. The Gaels, like their kinsmen in Ireland and England, and like many a small tribe in other lands, have been driven into the hills, or where they remained in the more fertile lowlands, they have become amalgamated with the intruding Saxon. This confinement to sterile tracts, lying aside from the usual highroads of traffic, condemns to an intellectual death, and to physical extinction as a race speaking a language of its own.

That Gaelic is dying out cannot be doubted. In the more remote parts of the Highlands and in the Hebrides it still maintains its ground; but wherever Gael and Saxon meet face to face the latter ends by forcing his language upon his only too willing fellow countryman. And the Gael learns English quickly, for he is a shrewd man, and knows that in all the more remunerative walks of life a knowledge of English cannot be dispensed with. The appreciation in which English is held by the Highlander may be gathered from the fact, that when he desires to say something exceptionally severe, he says, "Don beurla Orta," that is, "May you never speak correct English." The agencies which undermine Gaelic, and will end in destroying it, are gathering strength from day to day. The Highlands are becoming more accessible from day to day; a compulsory system of education in *English* schools has been in operation since 1872; and whilst the Gael is leaving his native home in shoals to seek his fortune in the lowlands or across

the ocean, the voids left are partly filled up by graziers and sportsmen of English speech.*

In the face of these destructive agencies, those which contribute towards the maintenance of Gaelic are but few and feeble. "Professor Blackie," writes one of my Ross-shire correspondents, "has undoubtedly given an impetus to the Gaelic language by his fervent advocacy for the institution of a Celtic chair in the University of Glasgow;" and from Perthshire I hear that "Gaelic or anything Highland or rustic is much more in vogue within the last few years." But neither University chairs nor Highland sports can save Gaelic; they will not even delay its extinction for a single day. The only thing that could put off, perhaps for centuries, the day on which the last of Gaelic will be heard in the Highlands, is its introduction into schools. There are Gaelic schools we know, but they are few and far between, and, for the most part, in the west, where Gaelic is strongest.†

The Education Code for 1878 determines that Gaelic "may be taught during the ordinary school hours, either by the certificated teacher, or by any person specially employed for the purpose." This, however, is but a small concession; for though in the payments for mere attendance Gaelic will thus count like any other subject, no additional payments, such as are given for proficiency in special subjects, will be made. In the more remote parts of the Highlands there certainly exists a desire to cultivate Gaelic more carefully than has been done hitherto. Actually the number of Gaelic schools is very small, and they are wanting more especially in those districts in which English has already gained a somewhat firm footing. But even were Government to grant all that is desired by the advocates of Gaelic, it would only put off, but not for ever, the day on which Gaelic will be gathered with its fathers.

* The great emigration of Highlanders and partial depopulation of the country is due to the ejection of the small tenants, to make room for the farmers from the south, and to the conversion of all the uplands into sheep walks or shooting grounds. The number of these large farmers, writes one of my correspondents in Inverness-shire, "has decreased very much during the last few years; large farms do not pay now. The proprietors are, in many cases, obliged to take them into their own hands, and, as a general rule, they employ native shepherds." I am glad to hear it. A country minister, who deplores this exodus, says in the last "Statistical Account of Scotland," that "the right of landlords to manage their properties according to their own pleasure no one will pretend to doubt." I do doubt it. The decrease of the population in Scotch Highlands is an occurrence for which rapacious and unprincipled landlords ought to be made amenable.

† The "Society for the Support of Gaelic Schools" maintains 26 schools, attended by 1,048 children. They are for the most part in the Hebrides. The income of the society in 1877 only amounted to 662*l.*, and it is urgently in want of funds. Mr. Thomas Martin, 49, Castle Street, Edinburgh, is assistant secretary.

Wales.

I shall begin my survey with the border counties, tracing in every instance the linguistic boundary embracing those districts in which Welsh is spoken by a majority of the inhabitants.

FLINTSHIRE has a mixed population, but that portion of the county which lies within the linguistic boundary is as purely Welsh as any other part of Wales. In Maelor Saesneg, the Saxon land (43 square miles, 5,948 inhabitants), a detached portion of the county, Welsh has wholly disappeared since the days of Henry VIII. When Defoe visited Bangor Monachorum, about 1730, he failed to procure a guide capable of giving the explanations he required. At the present day English alone is spoken.*

The linguistic boundary which divides the county proper into two portions of very unequal size begins at Wepre, at the mouth of the river Dee, runs south-west, crossing the river Alyn above Hope, and then follows closely the right bank of the river mentioned. All to the south-east of that line is English, with the exception that a large number of Welsh labourers are employed in the hamlets of Chemistry, Shotton, Queensferry, Pentre, and Sandycroft, all of them near the Dee, in the Saltney township of Hawarden. These labourers, forming about 40 per cent. of the population of the township, are immigrants, and their children do not learn Welsh. In the western portion of the parish of Hope (Hope Mountain, beyond the river Alyn), Welsh still keeps its ground, but with difficulty. In the towns of Welsh Flintshire English is of course the language of business, but Welsh is spoken by the bulk of the people. In Holywell (3,540 inhabitants, of whom 95 per cent. speak Welsh) and in Mold (3,976 inhabitants) it is said to maintain its ground, but in Flint and St. Asaph it is gradually being superseded by English. In the meantime nearly all religious services are carried on in Welsh, and there is hardly a Sunday school in which it is not employed.

The English portion of Flintshire has an area of 53 square miles, with 18,111 inhabitants, of whom 750 speak Welsh. The Welsh portion embraces 211 square miles, with 58,201 inhabitants, of whom 52,560, or 90·3 per cent., speak Welsh.

DENBIGHSHIRE, with the exception of a territory of limited extent, but including the important town of Wrexham, is wholly Welsh. The linguistic boundary enters the county a short distance to the west of the river Alyn, passes to the east of Brymbo and Broughton to within a couple of miles of Wrexham, then runs

* For interesting information on this old frontier land, see "*Archæologia Cambrensis*," July, 1874; April, 1875; April, July, and October, 1876; October, 1877, and January, 1879.



along the Great Western Railway until it reaches Offa's Dyke, that famous old national barrier, which it follows to the boundary of Shropshire, with this exception that Ruabon and its immediate vicinity are inclosed within it.

The territory to the east of this line is English. It has an area of 39 square miles, with 20,315 inhabitants, of whom only 800 speak Welsh. Within it lies the town of Wrexham, which had 8,576 inhabitants at the last census, but has now 10,000, and where Welsh is used by three or four congregations, English by twelve.

Ruabon (15,150 inhabitants in 1871, 18,000 now) lies within the Welsh boundary. All, or nearly all religious services are conducted there in Welsh, and "more Welsh is spoken every day," owing no doubt to the immigration of labourers. Only 600 persons are said to speak English only, and 2,000 Welsh and English.

In the parish of Chirk, the western portion of which is intersected by Offa's Dyke, there is a Welsh chapel, poorly attended, and Welsh is now understood only by a few old people.

In the parishes of Bersham, Broughton, Brymbo, Minera, and Esclusham above, to the west of Wrexham, which have a total population of 13,259 souls, Welsh is spoken by seven-eighths of the population, and English by the same number, but further in the interior of the country, and more especially in those parts which are at some distance from railroads, the knowledge of English is still very limited, scarcely more than half of the inhabitants being able to express themselves in it.

In the parish of Llansilin, on the boundary of Shropshire, the children are said to know Welsh very imperfectly, and the information I have received tends to show that along the Dee and in the valley of the Clwyd, up to Llanellidyn, it is slowly losing ground, the railway proving its most powerful enemy. In the far greater portion of the county, however, it maintains its ground firmly, and the greater part of the religious services are conducted in Welsh. In Ruthin (3,298 inhabitants) Welsh is spoken by 85 per cent. of the inhabitants, and in Denbigh (6,323 inhabitants) it is employed in eleven out of fourteen places of worship. Very little English is spoken in the country districts.

SHROPSHIRE is an English county, but a small portion of its western extremity is Welsh, including the parishes of Selattyn and Llanyblodwell, and the township of Sychtyn, which have an area of 19 square miles and 2,469 inhabitants, of whom 900 speak Welsh. The linguistic boundary is formed by Offa's Wall, and by a line running through the townships of Sychtyn to Garth-uchaf on the Afon Tanat, in the parish of Llanyblodwell. To the west of that line Welsh preponderates, to the east English. In Selattyn Welsh is spoken now only by the older people, but there are still two

services in Welsh to five in English. In the township of Sychtyn, the Welsh are in a majority. In Llanyblodwell Welsh preponderates in the west, English in the east, and the children of Welsh parents are often unable to speak Welsh. The Welsh service in the parish church has been discontinued since 1875, owing to a paucity of attendance. The few Welsh in the neighbouring parish of Llanymynech are immigrants, and Welsh immigrants are indeed numerous throughout Shropshire, and there are Welsh chapels at Oswestry, Shrewsbury, Houlston, Coedway, Bomer Heath and Cyrmbwch.

MONTGOMERYSHIRE is one of those border counties in which Welsh is visibly losing ground. In the valley of the Severn, up to within a mile or two of Llanllwchaiarn and Newtown, and to the east of that river, Welsh is heard only in the mouths of immigrants, and of a few very old people. At Welshpool and Montgomery Welsh has been extinct among the natives for these fifty years. At Newtown, however, about 30 per cent. of the inhabitants are still able to converse in Welsh, and a similar proportion of Welsh speakers* is met with as far as Llanidloes, beyond which the Severn valley penetrates a territory which is still wholly Welsh. Along the whole of the Severn, from Llanidloes down to and beyond Newtown, Welsh is gradually being forgotten, although still largely employed in the religious services of the dissenters and occasionally even in the Established Church.

Welsh has also disappeared from the valley of the Lower Vyrnwy, next to the Severn the most important river of the county. At Llandysilio it is not spoken at all; in the parish of Llanymynech only by a few old people, and it is only when we enter the parish of Llansaintffraid yn Mechan that Welsh is heard more frequently. That parish is divided by the river Cfernwg into two parts. In the northern part about one-half of the older people (say one-third of the population) speak Welsh, which is generally used in the services of the nonconformists, and once a month in the Established Church. The younger people rapidly forget Welsh; in one Sunday school, out of eleven classes there are only two in which religious instruction is imparted in Welsh, and these two classes are attended by adults. In the southern part of the parish very little Welsh is spoken. Proceeding up the Vyrnwy we first enter the Welsh districts on approaching Meifodd.

The linguistic boundary† on crossing the northern frontier

* Aberhafesp 20 per cent., Llandinam 27 per cent.

† A correspondent at Llansaintffraid has kindly forwarded to me a boundary line described in the "Byegones" column of the "Oswestry Advertiser," for 2nd October, 1878. That line I accept in its main features; I do not, however, include Llansaintffraid within it, for in that parish the majority no longer speak Welsh.

passes between Llansaintffraid and Llanfechan, strikes the Vyrnwy below, and follows that river up to Meifodd, thence it runs south to Castle Careinion, crosses the River Rhiw between New Mills and Llanwyddelan, leaving Manafon to the south. It then proceeds by Greygynog Hall and Bwlch y ffraid to Llanwnog, crosses the Cambrian railway at the Pont dol goch station, intersects the parish of Trefeglwys, approaches close to the Severn at Dollys, passes to the west of Llanidloes, and finally reaches the Radnorshire boundary to the east of the Wye. In the districts which border upon this line on the east Welsh is still spoken, but not by a majority, but to the west of it, Welsh is the language of the bulk of the inhabitants. Indications are not wanting that Welsh is slowly losing ground on the eastern watershed of the county, but on the western slope, in Cyfeiliog, its hold is firm. Even immigrants and their children frequently acquire it, and English is used very little in religious services. The following is a summary for the county:—

	Square Miles.	Population.	Able to Speak Welsh only.	Able to Speak Welsh and English.	Proportion per Cent. able to Speak Welsh.
Welsh part { Cyfeiliog	115	8,794	4,700	4,000	98·9
{ Eastern slope...	346	19,123	1,570	12,740	75·1
Mixed districts.....	137	18,536	280	5,470	31·1
English „.....	160	21,170	50	890	4·5
Total Montgomeryshire	758	67,623	6,600	23,100	43·9

RADNORSHIRE, if the language now spoken by the vast majority of the inhabitants be allowed to decide, is a portion of England and not of Wales. In former ages, however, it was purely Welsh. “The names of places (villages, farmhouses, hills, rivers, &c.), are “almost exclusively Cymraig. Amongst the inhabitants, however, “there is a large admixture of Saxon names, which bespeak a “considerable Saxon immigration.” As in the Highlands, the natives of the county emigrate in considerable numbers to England, whilst natives of England settle in the county. In 1871 no less than 14 per cent. were natives of England. Welsh still lingers in the extreme north-western corner of the county, but elsewhere it is spoken only by a few immigrants. The existence of Welsh Black Letter Bibles, like that at Nantmel, which dates back to the year 1620, shows that the extinction of Welsh is not to be measured by centuries. The services of the Church of England throughout the county are conducted in English, with one curious exception,—at Rhayader, where four Welsh sermons must annually be delivered, “under a bequest.” Nor do the Independents appear to have any

chapels in which Welsh is preached, for the two mentioned in the "Congregational Year Book" are without ministers, and, as far as I can make out, without congregations.

The Welsh language, as I have said, still lingers in the extreme west of the county. At Rhayader (976 inhabitants) 200 persons still speak Welsh, but the younger people have altogether forgotten it. A few classes in the Calvinist Sunday schools are taught in Welsh. In the neighbouring parish of Cwmtoyddwr, Welsh is somewhat more general, especially in the valley of the Elan, above Nantgwilt, and there are even two or three families who understand no English. In the parish of St. Harmon, some fifty years ago, when one of my contributors was a boy, all the services, with rare exceptions, were in Welsh. At the present day Welsh is only spoken by the older people, and only in that part of the parish which abuts upon the river Wye is it spoken by a majority. As to Nantmel, Welsh appears to have been general about a hundred years ago. The vicar now tells me that it is wholly extinct, whilst another informant makes it linger in the north-western part of the parish, towards Rhayader. Practically it is extinct. I believe a line which crosses the Wye above Rhayader and then runs south at some distance from it, to Elan Vale, where there is the only Welsh Baptist chapel of the county, will be found to include that small portion of Radnorshire where Welsh is still the language of the majority. This small territory embraces 54 square miles, with 713 inhabitants, of whom 470 speak Welsh. Outside of it lies a smaller district of 20 square miles, with 2,000 inhabitants, inclusive of the town of Rhayader, within which about 530 speak Welsh. All the rest of Radnorshire is as completely English as any county in England.

BRECONSHIRE is much influenced by its contact with English speaking districts, but for the present the language of the majority is Welsh. English is invading the county from three points, viz., from Builth, from Hay, and from Abergavenny, on the Usk. The immediate neighbourhood of Builth, including villages having such thoroughly Welsh names as Maesmynis and Llandoewi'rcwm, has become quite English, and only on rare occasions can a Welsh sermon be heard there. Hay, on the Hereford frontier, and the neighbouring parishes of Llanigon and Aberllunvey, are likewise English, Welsh being spoken only by a few old people and by immigrants. It appears to have survived longest at Capelyffin, an outlying hamlet of Llanigon, near the head of the Afon Honddu. At Talgarth Welsh was common many years ago, but is now spoken only by a minority. At Crickhowel, on the Usk, it is spoken only by old people, and Welsh services are no longer held in the parish church, though still continued in four dissenting chapels. The neighbouring parish of Llangenny has become completely Anglicised.

Brecknock, the capital, in the very centre of the country, has become a fourth focus, whence English spreads in all directions. It is used there only by the older people, and is declining rapidly.

Throughout the remainder of the county Welsh remains to the present day the language of the vast majority, it being heard most frequently in the country extending from the river Usk towards Glamorganshire. In the districts to the north of the Usk it is spoken by about 80 per cent., and in the valley of the Yrffon, in the north-west, by 75 per cent.; Llanwrtyd, however, on the Carmarthen border, being wholly Welsh. The only large town in which Welsh is spoken by a majority is Brynmawr, on the Monmouthshire frontier.*

Welsh is said to lose ground, in some cases rapidly, nearly throughout, but in the south and extreme west it is said to maintain itself, though English is coming into more general use.

The statistics for the county are:—

	Area. Square Miles.	Population. 1871.	Able to Speak Welsh only.	Able to Speak Welsh and English.	Proportion per Cent. able to Speak Welsh.
Welsh portion	650	45,194	6,340	29,950	80·3
Mixed „	18	9,149	—	3,230	35·3
English „	51	5,558	—	350	0·6
Total Brecon.....	719	59,901	6,340	33,530	66·8

Of MONMOUTHSHIRE only a small portion in the extreme west is Welsh, and curious to say, it is just that portion of the county which is most densely populated, owing to the attraction exercised in former times at least, by its stores of coal and iron. Whilst in Welsh Monmouthshire we find 741 inhabitants on a square mile, there live in the English part of the county only 250. Formerly Welsh was spoken over the whole of the county, and the geographical nomenclature remains Welsh to the present time. Even as recently as in the middle of the eighteenth century an English writer† says “that the people seldom acquire a knowledge of English,” and pathetically exclaims that “the multiplication of languages is a more immediate and perhaps more fruitful source of moral evil, than the frailty of Adam and Eve, or the loves of Cupid and Psyche.” The two languages still exist, but Welsh has been pushed back beyond the Usk, and if it were not for the

* Brynmawr, 5,739 inhabitants (100 Welsh, two-thirds English and Welsh).

† J. Gardner, “The History of Monmouthshire,” London, 1746.

immigration of Welsh miners, it would have disappeared before this altogether.

A line drawn along the watershed between the rivers Llwyd and Ebbw to the junction of the latter with the Sihowy, and thence to the Rumney above Machen, includes all that remains Welsh. Within that line, at Tredegar, Aberystwith, Mynyddyslwyn, and Bedwelty, Welsh is understood by 74 inhabitants out of every hundred, and it is more extensively made use of in churches and chapels than English. But it loses ground; on this point all the reports I have received are unanimous. "Fifty years ago," says one of my correspondents, "I lived in Tredegar, and the little boys in the streets did all talk Welsh while playing; I was there last summer, and did not hear any child speak Welsh." In Aberystwith, "the young do not know much of Welsh," elsewhere "the majority of the children do not learn it." All this points to the certain extinction of Welsh within a comparatively short period. The growing generation will speak English only.

There are two districts in which Welsh is still spoken by at least a fourth of the population. One of these embraces the country on the lower Ebbw and Rumney, and is bounded by a line passing to the east of Risca, Bassaleg, Marshfield, and Peterstone, where it reaches the coast. Rumney, a parish within that line, is said to have a majority of Welsh speaking inhabitants, whilst in Machen, on the Rumney, Welsh is spoken only by a tenth of the population, and two Welsh chapels had to be closed within the last few years, owing to the non-attendance of worshippers.

The second of these mixed districts embraces Blaenavon, where Welsh is spoken by some of the older people (one-third of the inhabitants), and employed in a few chapels of dissenters.

Everywhere else throughout Monmouthshire Welsh holds a very inferior place. At Abersychan (14,569 inhabitants), on the Llwyd, it is still taught in the Sunday schools, but only 500 persons speak it, and it dies fast. At Pontypool (4,834 inhabitants) it is spoken by a few of the old and by immigrants, 834 persons in all, and even those who speak Welsh prefer to attend an English church. At Caerleon only English is heard. At Newport (29,877 inhabitants) it is spoken by about 1,000, and there are three Welsh chapels.

Throughout the valley of the Usk, up to the Brecon frontier, Welsh is now the language of an insignificant minority. At Usk about 40 persons speak it, at Abergavenny it is seldom heard, although that town boasts a Welsh chapel. To the east of the Usk Welsh is very rarely spoken, and that only by immigrants. The statistics for the county are as follows:—

	Area. Square Miles.	Population. 1871.	Able to Speak Welsh only.	Able to Speak Welsh and English.	Proportion per Cent. able to Speak Welsh.
Welsh portion	83	61,525	1,500	44,850	73·7
Mixed „	32	17,713	—	6,380	36·0
English „	461	116,210	—	3,770	3·2
Total Monmouth	576	195,448	1,500	55,000	29·8

In GLAMORGANSHIRE English is perhaps more generally spoken than in any other part of Wales, but the language of the religious services is mainly Welsh. Welsh chapels abound in every district, including the large towns, and although the services in the Established Churches are not so frequently held in Welsh as they would be under similar conditions in the neighbouring diocese of St. David's, they are not entirely wanting in the rural districts. A very small portion of the county can be called English, the greater portion is purely Welsh or has a strong sprinkling of Welsh speaking inhabitants. The only tract of any extent within which English is spoken to the entire exclusion of Welsh is the peninsula of Gower, in the west. It is bounded by a line drawn from the west of Penclawdd to the neighbourhood of Swansea. Upper Llanrhidian, which lies to the north of that line, is Welsh.

The only other locality where English is spoken by more than three-fourths of the inhabitants, lies to the south of Cardiff. It includes the villages of Penarth and Lavernock. At the latter only two persons are said to speak Welsh, at the former Welsh is spoken by about 17 per cent.

Cardiff itself forms the centre of an extensive district in eastern Glamorganshire, within which Welsh is no longer spoken by a majority, and which is separated from the more thoroughly Welsh part of the county by a line commencing on the river Rumney, above Machen, and running thence to the north of Whitechurch, between Cardiff and Llandaff, past Leckwith, St. Lythans, Barry, Porthkerry, St. Athan, and Llantwit-major, to the coast near St. Donats. All the villages named lie within this "mixed district." In Cardiff (39,536 inhabitants) Welsh is spoken by nearly 15,000 persons, but at Roath, which belongs now to the borough, the Welsh are in a considerable minority. Further west, likewise on the coast, there is a smaller district of the same nature, which embraces the villages of Newton Nottage (with Porthcawl), Kenfigg, Pyle, and Margam. In these districts the Welsh is losing ground rapidly, and children addressed in Welsh by their parents will not unfrequently reply in English.

In the remainder of Glamorganshire Welsh remains the language of the majority, not only in the villages, but also in the towns, in which the Welsh element is being continually reinforced by immigrants from the interior. In Swansea (56,995 inhabitants) Welsh is said to be spoken by 42,000 persons, many of whom know no English. Those parts of the town which lie to the south and west of the market place are English; the north is Welsh, with a considerable sprinkling of Irish. Three years ago there were 5,269 Welsh communicants, 4,168 children in Welsh Sunday schools, and an average attendance of 11,503 persons at Welsh chapels. The number of these is said to be increasing. At Neath the services in six places of worship out of a total of fourteen are in Welsh, and English is spoken only by immigrants or by those who have risen in the social scale. Aberavon has a majority of Welsh speaking inhabitants, but Welsh is said to be declining.

All the towns in the interior of the county boast a majority of Welsh speaking inhabitants. In Aberdare (36,112 inhabitants) 26,000 speak Welsh; at Merthyr Tydvil (51,947 inhabitants) 34,400. Many English and Irish immigrants have settled in these towns, and Welsh is unanimously said to lose ground among the younger generation.

There are, however, parts of the county, away from the railways and highroads of commerce, where Welsh firmly maintains its footing, and the day when it shall cease to be spoken in Glamorganshire is yet far in the distance. The statistics for the county are as follows:—

	Area, Square Miles.	Population.	Persons able to Speak Welsh only.	Persons able to Speak Welsh and English.	Proportion per Cent. able to Speak Welsh.
Welsh	581	323,617	44,950	204,640	77·1
Mixed	147	63,731	3,400	18,010	33·6
English	82	10,511	—	460	4·4
Total Glamorgan	810	397,859	48,350	223,110	70·8

CARMARTHENSHIRE is far more intensely Welsh than Glamorgan, for if we exclude a small English district in its south-eastern corner, Welsh is spoken by more than 95 out of every hundred inhabitants, the proportion being lowest at Llanelly, Pembrey (Port Rush), St. Clears, Carmarthen, and Llandilo, but nowhere descending below 78 per cent.

The English district just referred to extends from the estuary of the Taf, westward, into Pembrokeshire. It includes the parishes of Laugharne, Llansadurnen, and Pendine and Marros, and is popularly supposed to have been settled by Flemings. Its area is

32 square miles, and it has 2,226 inhabitants, of whom less than 600 are able to speak Welsh. For the convenience of this portion of the population Welsh services are still held at Laugharne and Marros.

The remainder of the county is thoroughly Welsh, even in its towns. At Llanelly (14,973 inhabitants) the services are conducted in Welsh in 14 places of worship out of 23, and Welsh either maintains its ground, or yields very slowly. At Carmarthen, too, most services are conducted in Welsh, and the same is the case throughout the remainder of the county. Welsh is exclusively being used in no less than 38 churches out of a total of 104. Welsh fairly maintains its ground; English, to the exclusion of Welsh, being spoken only by immigrants and their descendants, and by some of the upper classes. Even immigrants are said to pick up a little Welsh.

PEMBROKESHIRE is Welsh in its northern, English in its southern half, and the line separating the two races is well marked. When Arnulf de Montgomery conquered the country, in the reign of Henry I, he no doubt brought English settlers with him. These were on two subsequent occasions reinforced by Flemings, who established themselves in Roose, with Haverfordwest for their capital, and in the peninsula of Castle Martin to the west of Tenby. In these early days southern Pembrokeshire was known as "Little England," and although the king's writ did not then run in Wales, it was duly acknowledged in this "Anglia trans-Wallina." The present English inhabitants may no doubt claim descent from these early settlers, but they have perpetually been receiving reinforcements, and the dialect they speak is said to resemble that of Somersetshire.* Of course, there has been some intermixture between the two races, but down to the present day they differ in language not only, but also physically. The English occupy the smaller but more fertile area, and outnumber the Welsh in the proportion of 100 to 55.

The line which separates the two races begins in St. Bride's Bay, with the Gignog or Brandy Brook, to the south of Brawdy. It passes to the north of Roch and Camrose, crosses the western Cleddau about a mile below Treffgarne, and extends thence westward, passing to the south of Spittal, Clarbeston, and Bletherston, as far as the Eastern Cleddau or Cleddy, which it strikes to the north-east of the village of Llanwhaden. Within the parish of Llanwhaden all the names of farmhouses and cottages to the west of the Cleddy are English, whilst those on the eastern side are Welsh.

* W. W. Skeet, "Bibliographical List," published by the English Dialect Society, p. 132. At the present day, out of 7,843 natives of England residing in Pembrokeshire, the majority came from Devon, Gloucester, Cornwall, and London.

Welsh, however, is spoken on both sides, but by no means so much so on the west as on the east bank. Leaving the Cleddy to the north of Robeston Wathen, the boundary encircles the town of Narberth, where Welsh is spoken only by an occasional wanderer from the hills, leaves Crinow and Lampeter Velfrey to the north, and to the north of Crunwear it crosses into Carmarthenshire. All the country to the north of that line (337 square miles) is Welsh, all to the south English. At some distance within the border line Welsh certainly appears to maintain its ground, but where Welsh parishes border upon English ones, it appears to lose ground slowly, and the children of Welsh parents who migrate into English parts speak English only. The rector of Treffgarne says that within the last fifty years English has been gaining ground "a little." From Spittal it is reported that Welsh "is being forgotten by the young." In the neighbouring parishes of East Walton and Llanwhaden Welsh is said to maintain its ground "so far." In the neighbourhood of Narberth the younger generation gradually forgets Welsh, and the rector of Llampeter Velfrey predicts that twenty years hence little but English will be spoken in his district. A knowledge of English in the meantime is spreading amongst the Welsh, five-sixths of whom are able to converse in it.

Throughout the Welsh district the services of the Established Church, with two solitary exceptions, are conducted in Welsh or in Welsh and English. The dissenters use Welsh with rare exceptions, both in their meeting places and in their Sunday schools. They have a few Welsh chapels to the south of the boundary line.

The statistics for the county are as follows:—

	Area. Square Miles.	Population. 1871.	Able to speak Welsh only.	Able to speak Welsh and English.	Proportion per Cent. able to Speak Welsh.
Welsh portion	337	32,935	5,430	25,620	91·8
English „	278	59,063	—	1,700	2·8
Total Pembroke	615	91,998	5,430	27,320	35·5

CARDIGANSHIRE is Welsh throughout. Even at Aberystwith, its principal town, the services in 11 out of 16 places of worship are conducted in Welsh, and though most of the inhabitants speak English, there are few who do not also understand Welsh. But whilst Welsh is slowly losing ground there, it is said firmly to maintain its hold upon the people throughout the rest of the county. Only immigrants and a few "aristocrats" do not understand it. Only in 3 places of worship are the services of the

Established Church conducted in English; in 44 they are carried on in Welsh; in 39 in both languages. The dissenting bodies make but little use of English. At the same time there exists a very general desire to acquire a knowledge of English, which is spoken, more or less fluently, by a majority of the inhabitants in the towns, and by many country people. In the more remote districts, however, not 10 in a 100 are able to read and write English correctly. Upon the whole, I believe we may assume that rather more than one-half of the inhabitants are able to express themselves in English.

MERIONETH is quite as Welsh as Carnarvon, although a knowledge of English is more general. All speak Welsh, with the exception of immigrants and a few persons of the upper classes. All, or nearly all, speak English in towns, and many of the younger people in the country districts. The quarrymen of Festiniog are stated to speak Welsh only. Welsh maintains its ground. A "man of Harlech," 60 years of age, writes that "there is a great increase in the knowledge of English as long since I remember, but I do not think that there is any diminution in Welsh speaking, reading, writing, or preaching." Nearly all religious services, including those of the Church of England, are conducted in Welsh.

CARNARVON is quite as Welsh as its southern neighbour, although owing to the larger number of English immigrants, the number of persons speaking Welsh is relatively smaller. Nearly all religious services are conducted in Welsh, and Welsh maintains its ground among young and old. English is "understood by many, spoken by very few." The majority of the older inhabitants do not understand it, except in the principal towns of the south, where its use, for business purposes, is universal. The children of immigrants, I am informed, learn Welsh in most cases. In the town of Carnarvon 3,500 persons speak Welsh only, 5,000 Welsh and English, and 1,000 English only. English is employed in one church and two small chapels, whilst the services in three large churches and seven chapels are conducted in Welsh. The board of guardians, the vestry, and the two school boards of the district, transact their business in Welsh, and the circulation of the two Welsh weekly papers in the town is four times that of their two English contemporaries.

In Bangor Welsh is spoken by all except by about 300 natives of England. In Conway only 50 persons are stated not to be able to speak Welsh, whilst in the favourite seaside town of Llandudno 250 persons speak Welsh only, 2,312 Welsh and English, and 200 English, the Welsh services being four times more numerously attended than the English ones.

The quarrymen of Penrhyn, Llanberis, and Talysarn, about 10,000 in number, speak Welsh only.

ANGLESEY, in spite of its Saxon name, is thoroughly Welsh, and the knowledge of English is more restricted in that county than in any other portion of similar extent throughout Wales. I am even assured that Welsh "is studied to a greater extent by the younger generation than formerly, and that even English immigrants 'learn a little Welsh.'" Welsh is almost exclusively used in all churches, chapels and Sunday schools, those of the Roman Catholic Irish, who are numerous at Holyhead, excepted.

I now give a summary for the whole of Wales:—

1. *Geographical Distribution of the Welsh Speaking Population of Wales.*

	Area, Square Miles.	Pro- portion per Cent.	Total Population, 1871.	Pro- portion per Cent.	Persons Speaking Welsh.	Pro- portion per Cent.
Districts in which Welsh is spoken by a majority	6,050	76.5	1,025,573	78.1	887,870	94.9
Districts in which it is spoken by 25 to 50 per cent.	357	4.5	113,030	8.7	38,046	4.1
Districts in which it is spoken by less than 25 per cent. of the inhabitants	1,501	19.0	174,080	13.2	8,614	1.0
Total	7,908	100.0	1,312,583	100.0	934,530	100.0

2. *Counties and Parts of Counties in which Welsh is Spoken by a Majority of the Inhabitants.*

	Area, Square Miles.	Population.	Persons Speaking Welsh.	Proportion per Cent.	Proportion per Cent. able to Speak English.
Flint	211	58,201	52,560	90.3	90.7
Denbigh	583	84,787	80,200	94.6	53.4
Montgomery	461	27,917	23,010	82.5	77.6
Radnor	54	713	470	66.2	97.1
Brecon	650	45,194	36,290	80.3	86.1
Monmouth	83	61,525	47,350	73.7	97.8
Glamorgan	581	323,617	249,590	77.1	86.1
Carmarthen	915	113,484	108,150	95.3	66.7
Pembroke	337	32,935	31,050	91.8	83.9
Cardigan	693	73,441	70,100	95.5	53.1
Merioneth	602	46,598	44,000	94.4	63.5
Carnarvon	578	106,121	98,600	92.9	43.5
Anglesey	302	51,040	47,500	93.1	38.0
Total	6,050	1,025,573	887,870	86.5	81.7

3. *Parts of Counties in which Welsh is Spoken by more than 25 per Cent., but less than 50 per Cent. of the Inhabitants.*

	Area, Square Miles.	Population.	Persons Speaking Welsh.	Proportion per Cent.	Proportion per Cent. able to Speak English.
Flint	3	1,901	756	39·8	100·0
Radnor	20	2,000	520	26·0	100·0
Montgomery	137	18,536	5,750	31·1	98·4
Brecon.....	18	9,149	3,230	35·3	99·7
Monmouth	32	17,713	6,380	36·0	100·0
Glamorgan	147	63,731	21,410	33·6	94·7
Total	357	113,030	38,046	33·7	96·8

It would appear from this table that Welsh is still spoken within the borders of Wales by no less than 934,530 individuals. In England, too, Welsh is still spoken in their homes by numerous natives of the principality. In 1871, 166,717 natives of Wales resided in England. Taking into consideration the proportion born in each county of Wales, I find that about 62,000 of them (37 per cent.) had some knowledge of Welsh when they came to England. The Welsh speaking Welsh thus number no less than 996,530 within the limits of England and Wales.*

The Welsh, consequently, are more formidable in numbers than are either their Scottish or their Irish kinsmen, and they are more formidable, too, in other respects, and will survive long after the Celtic dialects of Scotland and Ireland shall be numbered amongst the dead. They have a literature, newspapers, and periodicals, one of which, the "Trysfa Plant," or "Children's Treasury," has a circulation of 43,000 copies. Their literature is on the increase, and the Welsh language is more the subject of careful study than it ever was. "There is an abiding love of Welsh which clings to the people with great tenacity," says one of my Glamorganshire correspondents. The Welshman may market in English, but he prefers his religion in a Welsh garb, gives a preference to Welsh reading, and cultivates Welsh at his fireside. Of course the language is sustaining serious losses from day to day

* "Welsh" chapels, at which Welsh is supposed to be preached, are numerous in certain parts of England, the Calvinists having 58, the Independents 35, and the Baptists 17. In London there are 14, the oldest apparently founded in 1792; in Liverpool 20, in Manchester 8, in 11 other towns of Lancashire 13 (and in addition 12 missionary stations); Cheshire has 17 Welsh chapels, of which 4 are at Chester and 3 at Birkenhead; in Shropshire there are 8, including 2 each at Shrewsbury and Oswestry. Staffordshire has 6 (3 at Hanley); Birmingham 4; Durham 10 (3 at Stockton-on-Tees); Middlesboro' (Yorkshire) 3; Hereford 3 (all under one minister); Bristol 1; and Swindon (Wilts) 1. There is also a Welsh chapel at Dublin.

wherever Welsh and English come into contact. Vast tracts, formerly inhabited by Welsh speaking people, have been lost, and others will follow. But a language to which the people who speak it cling with affection dies a slow death, and Welsh may survive for centuries to come, if not for ever.

Amongst the agencies which might contribute most towards the maintenance of Welsh the school does not, for the school is English, even in those parts of the country where the children have no knowledge of English.* But whilst the school is being used as a means of eradicating the Welsh language, the pulpit has proved its staunch friend.

The Established Church neglected for a long time the duty it owed to the people as respects religious teaching. For years that church was governed by English bishops, who felt no sympathy for the people whose spiritual life they were called upon to direct. From 1714 to 1870 not one Welshman was raised to the episcopal bench. The people were almost driven into dissent. At the present time there are in the principality 1,145 churches of the Establishment, and about 3,000 chapels of dissenters, that is, a place of worship to every 320 inhabitants. The three leading bodies (Calvinistic Methodists, Independents, and Baptists) have no less than 2,781 chapels between them, and in 2,338 of these the religious services are carried on in Welsh. Sunday schools are attached to all these chapels, and it is they that still supply a vast number of Welshmen with the rudiments of education. The English Church too has wakened up to the necessity of cultivating Welsh, and in the diocese of St. David's alone the services in 113 churches are conducted in Welsh, and in 189 partially so. Even the Catholics occasionally have Welsh services.†

I have thus arrived at the end of my task, and now will summarise the results obtained by me. The number of Gaelic speaking Celts throughout the British Islands I estimate as follows:—

Irish Gaels—

In parts of Ireland where they form a majority	343,297
„ other parts of Ireland	474,277
„ Great Britain	50,000

Total..... 867,574

* Not a single instance of a Welsh school has come under my notice. Of course, many masters explain the meaning of words in Welsh when they know the language. That the children learn anything under so absurd a system is almost to be wondered at. They certainly do not learn much, and from an educational point of view, Wales lacks far behind England. The Sunday schools to some extent supply means of education. Of course they get no grants from the imperial funds.

† I gather these facts from the Year Books of these dissenting bodies, which must, however, be used with caution. They are anything but guides that may implicitly be trusted.

Manx men—

Isle of Man	12,535
-------------------	--------

Scotch Gaels—

In parts of Scotland where they form a majority	242,207
„ other parts of Scotland	58,746
„ Ireland (Antrim).....	301
„ England and Wales	8,000
Total	309,254

Welsh (Kymri)—

In parts of Wales where they form a majority....	887,870
„ the remainder of Wales.....	46,660
„ England	62,000
Total	996,530

The Celtic speaking inhabitants of the British Isles thus amount to 2,185,890 souls, or to about 7 per cent. of the entire population. About 456,735 of them cannot speak English, viz., 304,110 Welshmen, 103,562 Irishmen, 48,873 Scotchmen, and 190 Manxmen.

In concluding, I must crave your indulgence for many shortcomings, in a paper dealing with a subject for which the available materials are by no means very abundant, and had for the most part to be collected by myself. I must also express my most sincere thanks to those many gentlemen in the sister kingdoms, and in the principality of Wales, whose co-operation alone enabled me to prepare the paper I have now laid before you.

APPENDIX.

TABLE I.—*Ireland. The Irish Speaking*

	Population.		1851. Able to Speak		1871. Able to Speak	
	1851.	1871.	Irish only.	Irish and English.	Irish only.	Irish and English.
LEINSTER.						
Carlow	68,079	51,659	—	243	3	127
Drogheda, town	16,847	13,510	1	598	—	30
Dublin, city	253,369	246,326	27	3,399	3	1,085
„ county	146,778	158,936	5	1,276	5	553
Kildare	95,723	83,614	1	513	—	260
Kilkenny, city	19,975	12,710	5	585	—	82
„ county	138,773	96,669	99	20,731	316	6,342
King's County	112,076	75,900	—	403	1	245
Longford	82,348	64,501	3	1,462	—	245
Louth	90,815	70,511	50	18,712	3	4,076
Meath	140,748	95,558	7	8,956	37	2,165
Queen's County	111,664	79,791	—	244	—	89
Westmeath	111,407	78,432	1	920	—	276
Wexford	180,158	132,666	1	799	1	209
Wicklow	98,979	78,697	—	135	5	89
Army, &c.	9,582	—	—	—	—	—
Total	1,682,320	1,339,451	200	58,976	374	15,873
MUNSTER.						
Clare	212,440	147,864	25,446	101,550	4,432	53,713
Cork, city	85,732	78,642	123	10,258	96	5,294
„ county	563,576	438,434	46,486	249,548	11,532	135,437
Kerry	238,254	196,586	44,455	102,043	12,009	69,959
Limerick, city	53,448	39,353	313	3,891	13	1,655
„ county	208,684	152,583	6,800	71,182	1,389	21,708
Tipperary	331,567	216,713	728	62,036	675	21,245
Waterford, city	25,297	23,349	140	3,963	121	1,857
„ county	138,738	99,961	21,845	64,978	3,700	41,659
Army, &c.	7,864	—	—	—	—	—
Total	1,865,600	1,393,485	146,336	669,449	33,967	352,527

APPENDIX.

Population, 1851 and 1871. (Counties.)

Proportion per Cent. of Total Population able to Speak Irish.		Decrease of Total Population, 1851-71.	Absolute Decrease of Irish Speaking Population, 1851-71.	Relative Decrease of Irish Speaking Population, 1851-71.	Proportion per Cent. of Illiterate over 5 Years of Age, 1871.	
1851.	1871.					
		Per cent.	Per cent.	Per cent.		LEINSTER.
0·36	0·25	24	46	31	26·3	Carlow
3·57	0·22	20	95	94	34·2	Drogheda, town
1·33	0·44	5	69	67	19·5	Dublin, city
0·87	0·36	inc. 8	55	59	18·8	„ county
0·54	0·31	13	50	43	26·0	Kildare
2·96	0·64	36	86	78	30·5	Kilkenny, city
15·01	6·88	30	68	54	30·4	„ county
0·36	0·32	32	39	11	29·9	King's County
1·78	0·38	22	81	78	32·0	Longford
20·66	5·79	23	78	71	38·7	Louth
6·37	2·31	32	75	64	32·1	Meath
0·22	0·11	29	64	50	26·5	Queen's County
0·83	0·35	30	70	58	31·0	Westmeath
0·44	0·16	36	74	63	31·7	Wexford
0·14	0·12	20	32	14	28·1	Wicklow
—	—	—	—	—	—	Army, &c.
3·52	1·21	20	73	66	27·8	Total
						MUNSTER.
59·78	39·31	30	54	34	37·9	Clare
12·11	6·86	8	48	44	29·4	Cork, city
52·56	33·53	22	51	36	42·7	„ county
61·49	41·69	17	44	32	47·3	Kerry
7·86	4·24	27	60	46	29·4	Limerick, city
37·37	15·14	27	70	59	33·9	„ county
18·93	10·11	34	65	47	30·8	Tipperary
16·22	8·49	77	52	48	32·4	Waterford, city
62·59	45·38	28	47	30	50·7	„ county
—	—	—	—	—	—	Army, &c.
43·73	27·73	25	53	36	39·2	Total

The Irish Speaking Population,

	Population.		1851. Able to Speak		1871. Able to Speak	
	1851.	1871.	Irish only.	Irish and English.	Irish only.	Irish and English.
ULSTER.						
Antrim	264,622	236,361	11	3,022	14	454
Armagh	196,084	179,260	148	13,588	21	3,903
Belfast, town	87,062	174,412	—	295	—	294
Carrickfergus	8,520	9,397	—	17	—	10
Cavan	174,064	140,735	54	12,973	58	3,300
Donegal	255,158	218,334	34,882	38,376	18,629	44,506
Down	320,817	277,294	2	1,151	2	336
Fermanagh	116,047	92,794	10	2,694	10	349
Londonderry	192,022	173,906	28	5,378	65	1,319
Monaghan	141,823	114,969	243	10,712	138	4,964
Tyrone.....	255,661	215,766	405	12,487	130	6,421
Army, &c.	1,999	—	—	—	—	—
Total	2,013,879	1,833,228	35,783	100,693	19,067	65,856
CONNAUGHT.						
Galway, town.....	34,146	19,843	7,727	15,128	2,434	6,929
„ county	287,538	228,615	67,859	131,530	27,805	102,535
Leitrim	111,897	95,562	144	14,859	341	6,514
Mayo	274,499	246,030	49,643	130,435	16,509	122,452
Roscommon	173,436	140,670	1,326	44,970	739	17,364
Sligo.....	128,515	115,493	10,584	38,644	23 26	24,263
Army, &c.	2,448	—	—	—	—	—
Total	1,012,479	846,213	137,283	375,566	50,154	280,057
IRELAND	6,574,278	5,412,377	319,602	1,204,684	103,562	714,313

1851 and 1871. (Counties)—Contd.

Proportion per Cent. of Total Population able to Speak Irish.		Decrease of Total Population, 1851-71.	Absolute Decrease of Irish Speaking Population, 1851-71.	Relative Decrease of Irish Speaking Population, 1851-71.	Proportion per Cent. of Illiterate over 5 Years of Age, 1871.	
1851.	1871.					
11.15	0.19	Per cent. 11	Per cent. 85	Per cent. 89	15.8	ULSTER.
7.01	2.18	9	71	69	30.4	Antrim
0.34	0.17	inc. 100	Sta.	50	15.7	Armagh
0.20	0.11	inc. 10	41	45	11.3	Belfast, town
7.48	2.39	19	74	69	30.1	Carrickfergus
28.71	28.92	14	14	inc. 0.7	48.5	Cavan
0.36	0.09	14	71	75	18.8	Donegal
2.33	0.39	20	87	83	27.6	Down
2.81	0.79	9	75	71	22.2	Fermanagh
7.72	4.44	19	53	42	30.7	Londonderry
5.04	3.03	15	49	40	29.0	Monaghan
—	—	—	—	—	—	Tyrone
						Army, &c.
6.77	4.63	9	38	32	26.4	Total
67.02	47.29	42	59	20	50.4	CONNAUGHT.
69.36	57.01	22	35	18	56.9	Galway, town
13.41	7.17	15	54	46	32.8	„ county
65.60	56.49	10	23	14	57.4	Leitrim
26.69	12.86	29	61	52	38.9	Mayo
38.30	23.02	10	46	40	43.1	Roscommon
—	—	—	—	—	—	Sligo
						Army, &c.
50.66	39.02	16	36	23	49.3	Total
23.26	15.11	18	46	35	33.4	IRELAND

TABLE II.—*Ireland.—The Irish Speaking Population, 1851 and 1871.*

(BARONIES.)

[This table includes *all* Baronies which had in 1871 an Irish Speaking Population of at least 1 per Cent.]

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
LEINSTER—CARLOW.						
St. Mullins, Lower (Tinnahinch)....	5,781	128	2·3	6,889	89	1·3
Remainder of Carlow county	62,297	115	0·2	44,761	41	0·1
Total	68,078	243	0·4	51,650	130	0·3
DUBLIN.						
Castlenock (Finglas)	10,196	243	2·4	9,597	100	1·0
Remainder of county	136,582	1,038	0·7	149,339	458	0·3
Total	146,778	1,281	0·9	158,936	558	0·4
KILKENNY.						
Callan (Callan)	6,365	477	7·5	3,410	440	12·9
Crannagh (Freshford)	12,741	1,411	11·1	8,513	318	3·7
Fassadinin (Castlecomer, Bally- ragget)	20,917	390	1·9	15,908	140	0·9
Galmoy (Urlingford)	10,383	458	4·4	6,825	42	0·7
Gowran (Thomastown, Craigue- nahanagh)	29,915	1,748	5·9	21,130	636	3·0
Ida (Rosbercon)	16,150	5,756	45·7	11,346	1,673	14·7
Iverk (Pilltown)	13,574	4,242	31·2	10,389	1,055	10·0
Kells (Kells, Kilmaganny)	9,725	2,216	22·8	6,334	918	14·5
Knocktopher (Mullinavat)	10,942	2,866	26·3	7,526	1,239	16·5
Shillelogher (Bennetsbridge)	8,091	1,266	15·6	5,288	198	3·7
Total	138,773	20,830	15·0	96,669	6,658	6·9
KING'S COUNTY.						
Garrycastle (Fermanagh, Banagher, } Cloghar, Shannon Bridge)	21,210	239	1·1	14,097	154	1·1
Remainder	90,866	164	0·2	61,803	92	0·1
Total	112,076	403	0·4	75,900	246	0·3
LOUTH.						
Ardee (Ardee, Castlebellingham)....	22,274	3,715	16·6	15,094	660	4·4
Dundalk, Lower (Carlingford)	15,732	4,625	28·7	13,646	1,479	10·8
„ Upper (Dundalk, } Blackrock)	23,268	5,987	25·7	20,866	1,495	7·1
Ferrard (Cullon, Dunleer, Clogher)	17,789	2,857	16·0	12,601	230	1·8
Louth (Louth, Lurgangreen)	9,424	1,672	17·8	6,568	210	3·2
Drogheda, Barony (adjoins town)	2,328	186	8·1	1,736	5	0·3
Total	90,815	18,762	20·7	70,511	4,079	5·6

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
MEATH.						
Fore (Oldcastle)	11,009	1,577	14·3	7,305	547	7·5
Kells, Lower (Moynalty)	8,964	698	7·1	6,655	214	3·2
„ Upper (Kells)	16,070	1,502	9·4	10,553	550	5·2
Morgallion (Nobber)	7,290	609	8·1	5,108	233	4·6
Navan, Lower (Navan)	12,523	911	7·3	8,799	285	3·3
„ Upper (Trim)	4,227	152	3·6	2,925	42	1·4
Slane, Lower (Drumcondra)	6,586	1,041	15·8	4,434	208	4·7
Reminder	74,079	2,473	3·3	49,779	123	0·2
Total	140,748	8,963	6·4	95,558	2,202	2·3
WESTMEATH.						
Brawny (Athlone)	8,568	85	1·0	5,082	53	1·0
Fore (Castle Pollard)	12,136	199	1·6	8,710	104	1·2
Remainder	90,703	637	0·7	64,640	19	—
Total	111,407	921	0·8	78,432	276	0·4
LONGFORD.						
Granard (Granard, Ballinallee)	22,539	686	3·1	18,017	72	0·4
Longford (Longford, Newtown Forbes, Drumlish)	19,911	417	2·1	16,808	92	0·5
Rathcline (Ballymahon, Keenagh)	10,229	282	2·7	7,720	36	0·5
Remainder	29,669	80	0·3	21,956	45	0·2
Total	82,348	1,465	1·8	64,501	245	0·4
MUNSTER—CLARE.						
1. Bunratty, Lower (New- market-on-Fergus)	15,263	3,853	25·2	9,984	1,633	16·3
2. Bunratty, Upper (Quin)	11,732	4,403	37·6	8,392	1,597	19·0
3. Burren (Ballyvaghan)	8,742	7,467	85·8	6,142	4,405	71·1
4. Clonderalaw (Killadysert)	20,719	11,557	55·8	15,089	4,906	32·5
5. Corcomroe (Ennistimon)	20,369	16,518	80·9	14,514	8,542	58·9
6. Ibrickan (Milltown Malbay)	18,675	14,567	77·8	14,560	7,458	51·1
7. Inchiquin (Corrofin)	14,468	10,518	72·5	11,510	8,013	69·7
8. Islands (Ennis, Clare)	26,503	10,704	40·4	17,217	5,335	31·0
9. Moyarta (Kilrush, Kilkee)	33,559	28,448	84·6	21,833	12,006	55·1
10. Tulla, Lower (Killalo)	19,353	5,533	28·6	13,649	2,338	17·2
11. „ Upper (Tulla)	23,057	8,428	36·4	14,974	2,912	19·4
Total	212,440	126,996	59·8	147,864	58,145	39·3
CORK.						
1. Bantry (Bantry)	12,328	8,537	69·4	9,534	3,381	34·4
2. Barretts (Mourne Abbey)	6,164	2,770	44·9	5,000	1,482	29·6
3. Barrymore (Queenstown, Rathcormack, Castle Martyr)	50,393	22,904	45·4	37,128	7,935	21·4
4. Bear (Bearhaven)	19,909	11,811	59·4	15,807	9,974	63·1

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
CORK—Contd.						
5. Carbery, East (E. Division), (Clonakilty)	22,608	13,704	60·7	19,083	7,103	37·2
6. Carbery, East (W. Division), (Dunmanway, Ross Carbery)	26,119	18,051	69·2	23,521	10,637	45·3
7. Carbery, West (E. Division), (Skibbereen)	29,531	17,216	58·3	23,360	10,449	44·7
8. Carbery, West (W. Division), (Skull, Crookhaven)	26,702	18,294	68·5	22,277	8,093	36·3
9. Condons and Clangibbon (Fermoy, Mitchelstown)....	32,523	10,736	33·0	25,236	6,543	26·0
10. Courceys (Ballinspittle)	2,604	2,017	77·6	2,111	1,398	66·6
11. Cork (Douglas, Blackrock)	28,500	7,721	27·1	21,876	6,781	30·9
12. Duhallow (Kanturk, New- market)	52,553	23,050	43·8	41,698	8,319	20·0
13. Fermoy (Mallow, Doneraile, Glanworth)	36,237	12,943	35·8	26,378	4,235	15·0
14. Ibane and Barryroe (Court- macsherry)	15,225	9,334	61·4	12,400	4,252	34·2
15. Imokilly (Middleton, Youghal, Cloyne)	53,570	31,108	58·0	36,648	15,865	43·3
16. Kerrycurrihy (Passage, Monkstown, Crosshaven)....	13,214	6,602	50·0	10,422	2,200	21·1
17. Kinalea (Inishannon, Oyster- haven)	13,734	9,341	68·2	9,819	3,942	40·2
18. Kinalmeaky (Bandon)	14,291	6,378	44·6	10,581	2,541	24·0
19. Kinnatallgoon (Ballynoe)	6,250	4,922	78·8	4,158	2,120	50·9
20. Kinsale (Kinsale)	10,321	4,199	40·7	10,325	1,074	10·4
21. Muskerry, East (Ballincollig, Blarney)	31,790	19,603	61·7	24,857	7,513	30·2
22. Muskerry, West (Macroom, Millstreet)	36,745	27,837	75·9	30,331	18,496	61·0
23. Orrery and Kilmore (Charle- ville, Batticevant)	22,266	6,956	31·2	15,884	2,536	16·0
Total	563,576	296,034	52·5	438,434	146,969	33·5
Cork, city	85,732	10,381	12·1	78,642	5,390	6·9
KERRY.						
1. Clanmaurice (Ardfert)	28,442	15,316	53·9	25,047	7,260	29·0
2. Corkaguiney (Dingle)	28,989	20,749	71·5	21,676	11,834	54·5
3. Dunkerron, North	5,738	5,057	88·8	5,596	3,724	66·5
4. „ South (Sneem)	10,951	9,089	82·6	10,367	5,074	48·8
5. Glanarought (Kenmare)	15,403	8,643	56·1	10,667	3,939	36·8
6. Iraghticonnor (Listowell, Ballylongford, Tarbert)	32,577	14,424	44·2	23,684	4,587	19·3
7. Iveragh (Cahersiveen)	26,937	24,123	89·7	22,449	13,650	60·9
8. Magunihy (Killarney)	34,283	23,498	68·5	29,820	13,927	46·8
9. Trughanacmy (Tralee, Castle Island)	54,934	25,598	46·6	47,280	17,973	38·0
Total	238,254	146,498	61·5	196,586	81,968	41·7

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
LIMERICK.						
1. Clanwilliam (Castleconnel)	21,034	2,772	13·2	15,086	1,131	7·5
2. Connello, Lower (Rathkeale, Askeaton)	18,738	7,512	40·2	12,510	1,008	8·1
3. Connello, Upper (Ballingarry)	20,032	11,893	59·4	11,175	2,530	22·6
4. Coonagh (Oola)	12,567	2,077	16·5	9,841	290	2·9
5. Coshlea (Kilfinnane)	27,140	14,461	53·4	20,533	2,763	13·5
6. Coshma (Croom, Bruff)	15,328	2,934	19·2	10,986	1,455	13·2
7. Glenquin (Newcastle, Abbey-feale)	25,937	15,101	58·3	21,351	7,178	33·4
8. Kenry (Pallaskenry)	8,362	3,679	44·0	5,632	698	12·5
9. Kilmallock (Kilmallock)	3,160	746	23·3	2,102	55	2·6
10. Oowneybeg (Cappamore)	7,229	725	10·1	5,946	225	3·8
11. Pubblebien (St. Patrick's Well)	15,152	3,726	24·5	9,341	1,096	11·8
12. Shanid (Glin)	19,816	7,270	36·7	17,114	3,062	17·9
13. Small County (Hospital)	14,189	5,086	35·8	10,966	1,606	14·6
Total	208,684	77,982	37·4	152,583	23,097	15·1
Limerick, city	53,448	4,204	7·9	39,353	1,668	4·2
TIPPERARY.						
1. Clanwilliam (Tipperary)	42,190	7,056	16·7	28,486	1,919	7·4
2. Eliogarty (Thurles, Templemore)	33,811	2,254	6·7	21,041	492	2·3
3. Iffa and Offa, East (Carrick-on-Suir, Clonmell)	38,862	10,913	28·1	26,387	4,604	17·4
4. Iffa and Offa, West (Caher)	32,823	21,583	65·8	22,053	8,473	38·5
5. Ikerrin (Roscrea)	23,196	296	1·2	13,153	38	0·3
6. Kilnananagh, Lower (Dun-drum)	9,143	1,070	11·7	6,973	393	5·6
7. Kilnananagh, Upper (Borrisoleigh)	15,291	1,875	12·2	11,961	519	4·3
8. Middlethird (Cashel, Fethard)	34,691	9,167	25·4	21,520	3,094	14·4
9. Ormond, Lower (Nenagh)	37,174	271	0·7	21,626	153	0·7
10. „ Upper (Silvermines)	18,634	437	2·4	11,484	72	0·6
11. Oowney and Arra (Newport, Ballina)	19,103	1,001	5·2	14,352	312	2·2
12. Slievardagh (Killenaule)	26,649	6,778	25·4	17,677	1,851	10·4
Total	331,567	627,64	18·9	216,713	21,920	10·1
WATERFORD.						
1. Coshmore and Coshbride (Lismore, Cappoquin, Tallow)	24,883	16,653	66·9	17,111	7,649	45·7
2. Decies within Drum (Ardmore)	18,600	14,543	78·1	12,620	5,971	47·3
3. „ without Drum (Dun-garvan)	42,678	27,248	63·8	30,429	18,909	62·1
4. Gaultiere (Passage, Dunmore)	12,376	5,190	41·8	9,294	2,540	27·3

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
WATERFORD—Contd.						
5. Glenahiry	8,210	3,039	37·1	5,900	3,360	56·9
6. Middlethird (Tramore)	14,880	8,805	59·1	12,019	2,934	24·4
7. Upperthird (Portlaw, Car- rickbeg)	16,309	11,291	69·2	11,668	3,996	34·1
8. Kilculliheen (Suburb of Waterford)	802	54	6·7	900	128	14·2
Total	138,738	86,823	62·6	99,961	45,359	45·4
Waterford city	25,297	4,103	16·2	23,349	1,978	8·5
ULSTER—ANTRIM.						
Cary (Ballycastle, Bushmills, Armoy)	18,141	1,214	6·6	16,074	131	0·8
Glenarm, Lower (Glenarm, Cushendall)	9,853	1,459	14·9	9,522	170	1·8
Remainder	236,628	360	0·1	210,765	167	0·1
Total	264,622	3,033	1·1	236,361	468	0·2
ARMAGH.						
Fews, Upper (Newtown Hamil- ton, Crossmaglen)	22,399	4,187	18·6	18,482	1,136	6·1
Orior, Upper (Newry, Camlough)	31,664	9,229	29·1	30,311	2,658	8·8
Remainder	142,021	320	0·2	130,467	130	0·1
Total	196,084	13,736	7·0	179,260	3,924	2·2
CAVAN.						
Castlerahan (Ballyjamesduff, Mullagh)	28,097	2,991	10·7	23,362	648	2·8
Clankee (Baillieborough, Kings- court, Shercock)	26,606	2,701	10·1	21,606	431	2·0
Clanmahon (Bellanagh)	19,952	2,035	10·2	16,443	268	1·6
Loughlee, Upper (Cavan, Bally- haise, Swadone)	27,660	1,447	5·2	22,193	311	1·4
Tullygarvoy (Cootehill)	25,955	939	3·6	20,075	113	0·6
Tullyhaw (Swanlinbar, Bally- connell)	20,207	2,746	13·6	17,286	1,559	9·0
Remainder	25,587	168	0·6	19,770	28	0·1
Total	174,064	13,027	7·5	140,735	3,358	2·4
DONEGAL.						
Banagh (Killibegs, Mount- charles, Ardara)	37,526	16,723	44·6	31,287	13,700	43·8
Boylagh (Glenties, Dunglow)	21,642	16,326	75·6	21,988	15,931	72·4
Inishowen, East (Moville, Car- nedonagh)	31,933	7,704	24·1	28,807	4,793	16·7

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
DONEGAL—Contd.						
Inishowen, West (Buncrana)	16,311	950	5·8	14,397	710	4·9
Kilmacrenan (Rathmelton, Let- terkenny, Kilmacrenan)	62,046	24,406	39·3	53,186	22,328	43·9
Raphoe, North (Lifford, Raphoe)	54,043	5,532	10·3	{ 20,443	236	1·1
" South (Castlefinn, Bally- bofey, Stranorlar)				{ 23,448	4,042	17·2
Tirhugh (Ballyshannon, Donegal)	31,657	1,617	5·1	24,778	1,395	5·6
Total	255,158	73,258	28·7	218,334	63,135	28·9
LONDONDERRY.						
Keenaght (Newtownlimavady, } Dungiven)	29,016	375	1·3	23,738	280	1·2
Loughinsholin (Kilrea, Bellaghy, Magherafelt, Draperstown) }	71,974	3,560	4·9	65,023	743	1·1
Tirkeeran (Muff, Feeny)	28,333	963	3·4	25,357	132	0·5
Remainder	62,699	508	0·8	59,788	229	0·4
Total	192,022	5,406	2·8	173,906	1,384	0·8
MONAGHAN.						
Cremorne (Ballybay, Castleblaney)	38,935	2,008	5·1	33,335	434	1·3
Farney (Carrickmacross)	31,521	8,110	25·7	23,169	4,159	17·9
Trough (Emyvale)	13,248	404	3·1	10,666	309	2·9
Remainder	58,129	432	0·8	47,799	200	0·4
Total	141,823	10,955	7·7	114,969	5,102	4·4
TYRONE.						
Clogher (Fintona, Fivemiletown, } Ballygawley)	30,820	1,091	3·5	24,442	134	0·5
Dungannon, Upper (Cookstown, } Coagh)	32,937	1,867	5·7	29,594	386	1·3
Omagh, East (Omagh, Beragh) }	43,969	1,714	5·2	36,622	916	2·5
" West (Castleberg)	18,920	1,332	7·1	16,404	841	5·1
Strabane, Upper (Gortin)	23,042	5,548	24·1	19,759	3,882	19·6
Remainder	105,973	1,370	1·3	88,945	392	0·5
Total	255,661	12,892	5·0	215,766	6,551	3·0
CONNAUGHT—GALWAY.						
1. Aran (Irishmore Island)	3,339	3,086	92·1	3,050	2,759	90·5
2. Athenry (Athenry)	5,858	4,013	68·4	3,998	2,546	63·6
3. Ballymoe (Ballimoe)	21,385	17,140	80·1	18,201	8,142	44·7
4. Ballinahynch or Connemara } (Clifden)	24,356	20,809	85·2	23,969	18,362	76·5
5. Clare (Tuam)	32,351	28,594	88·4	24,684	18,280	74·0
6. Clonmacnowen (Ballinasloe) }	13,614	2,652	19·6	8,330	1,066	12·8
7. Duhkellin (Oranmore)	17,475	12,790	73·1	13,069	8,535	65·1
8. Dunmore (Dunmore)	20,310	16,906	83·3	17,899	11,903	66·5

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
GALWAY—Contd.						
9. Kilconnell (Kilconnell)	11,565	6,114	52·7	8,030	3,528	44·1
10. Killian (Ballygar, Mount Bellew)	11,693	8,568	73·2	9,563	5,407	56·6
11. Kiltartan (Gort, Kinvarra)	19,602	13,912	70·9	12,603	6,815	34·1
12. Leitrim (Woodford)	19,669	8,469	43·0	14,443	3,183	22·1
13. Longford (Portumna)	21,473	5,745	26·8	14,171	2,009	14·1
14. Loughrea (Loughrea)	13,832	6,547	47·4	8,877	4,898	55·2
15. Moycullen or Lar Connaught } (Oughterald)	21,979	18,544	84·4	22,103	15,236	69·0
16. Ross (or Joyce's country)	7,691	7,113	92·5	8,166	6,019	73·4
17. Tiaguin (Newtownbellew)	21,346	18,389	86·3	17,459	11,642	66·5
Total	287,538	199,389	69·4	228,615	130,340	57·0
Galway town	34,146	22,855	67·0	19,843	9,363	47·2
LEITRIM.						
1. Carrigallen (Ballinamore)	20,454	997	4·8	17,487	136	0·8
2. Drumahaire (Manor Hamil- ton, Drumkeeran)	28,561	8,948	31·3	25,366	4,317	16·6
3. Leitrim (Carrick-on- Shannon, Jamestown)	22,527	886	3·5	17,557	215	1·2
4. Mohill (Mohill, Cleone)	22,155	824	3·7	19,586	144	0·8
5. Rosclogher (Kilnough)	18,200	3,348	18·4	15,571	2,043	13·0
Total	111,897	15,003	13·4	95,562	6,855	7·2
MAYO.						
1. Burrishoole (Newport)	24,728	16,516	66·9	20,601	13,455	65·3
2. Carra (Castlebar)	32,687	23,041	70·3	28,611	15,517	54·3
3. Clannorris (Clare)	19,784	11,618	58·7	17,669	9,880	55·8
4. Costello (Ballyhannis)	43,210	21,310	49·3	46,929	23,284	49·7
5. Erris (Belmullet)	19,630	17,216	87·8	17,953	13,869	77·5
6. Gallen (Swineford)	34,227	25,847	75·6	38,355	25,686	66·9
7. Kilmaine (Ballinrobe)	30,983	20,333	65·6	22,681	12,719	56·0
8. Murrisk (Westport)	24,983	16,094	64·3	17,647	8,854	50·3
9. Tirawley (Ballina, Killala)	44,167	28,083	63·5	35,584	15,697	44·1
Total	274,499	180,078	65·6	246,030	138,961	56·5
ROSCOMMON.						
1. Athlone (Athleague)	36,140	7,354	20·4	26,767	4,072	15·2
2. Ballintober, north (Roosky)	10,273	517	5·0	8,572	135	1·6
3. " south (Ros- common)	17,472	2,525	14·4	11,996	562	4·7
4. Ballymoe	4,817	1,873	34·9	3,388	1,034	30·5
5. Boyle (Boyle)	28,094	5,659	20·1	24,612	2,485	10·1
6. Castlereagh (Castlereagh)	22,026	11,465	52·1	19,462	3,309	16·9
7. Frenchpark (Frenchpark)	21,216	9,573	45·1	21,402	4,282	20·0

TABLE II.—*The Irish Speaking Population, 1851 and 1871. (Baronies)—Contd.*

	1851.			1871.		
	Total Population.	Persons able to Speak Irish.	Proportion per Cent.	Total Population.	Persons able to Speak Irish.	Proportion per Cent.
ROSCOMMON—Contd.						
8. Moycarn	6,713	1,263	19'4	4,491	642	14'5
9. Roscommon (Elphin, Stokes-town).....}	26,885	6,067	22'5	19,980	1,582	9'0
Total	173,436	46,296	26'7	140,670	18,103	12'9
SLIGO.						
1. Carbury (Sligo)	38,059	11,118	29'2	29,930	4,376	14'7
2. Coolavin	7,895	3,429	43'4	8,406	1,117	13'3
3. Corran (Ballymote)	13,173	5,685	43'1	12,152	1,652	13'5
4. Leyney (Tobercurry)	25,283	12,218	48'3	26,166	10,028	38'3
5. Tireragh (Easky)	24,324	10,740	44'2	21,857	6,128	28'0
6. Tirerrill (Coolooney)	19,781	6,038	30'5	16,980	3,288	19'4
Total	128,515	49,228	38'3	115,493	26,589	23'0

TABLE III.—*Scotland. The Gaelic Speaking Population.*

Counties.	Area, Square Miles.	Population, 1871.	Persons able to Speak Gaelic.	Persons able to Speak Gaelic and English.	Proportion per Cent. able to Speak Gaelic.
Caithness	703	39,992	—	7,800	19'5
Sutherland	2,120	24,317	1,362	20,400	89'6
Ross and Cromarty ...	3,258	80,955	11,350	50,850	76'9
Inverness	4,255	87,531	24,520	48,380	83'3
Nairn	215	10,225	100	2,340	23'9
Elgin	531	43,612	6	2,100	4'8
Banff	685	62,023	5	650	1'1
Aberdeen	1,970	244,603	20	1,560	0'6
Forfar	890	237,567	—	3,000	1'3
Perth	2,609	127,768	1,020	19,260	15'9
Stirling	466	98,218	—	1,900	1'9
Dumbarton	207	58,857	—	1,800	3'1
Argyle	3,380	75,679	10,340	51,560	81'8
Bute	215	16,966	150	6,480	39'1
Remainder of Scotland	9,327	2,151,705	—	34,000	1'6
Total	30,831	3,360,018	48,873	252,080	8'9

TABLE IV.—*Wales. The Welsh Speaking Population.*

	Area, Square Miles.	Population, 1871.	Persons able to Speak Welsh only.	Persons able to Speak Welsh and English.	Proportion per Cent. of Persons able to Speak Welsh.
Flint	264	76,312	5,420	47,890	70.0
Denbigh	612	105,102	39,500	41,500	77.1
Montgomery.....	758	67,623	6,600	23,100	93.9
Radnor	432	25,430	20	1,000	4.0
Brecon	719	59,901	6,340	33,530	66.8
Monmouth	576	195,448	1,500	55,000	29.8
Glamorgan	810	397,859	48,350	223,110	70.8
Cardiff	947	115,710	37,800	70,920	93.1
Pembroke	615	91,998	5,430	27,320	35.5
Cardigan	693	73,441	34,500	35,600	95.5
Merioneth.....	602	46,598	17,000	27,000	94.4
Carnarvon.....	578	106,121	60,000	38,600	92.9
Anglesey	302	51,040	31,650	15,850	93.1
Total	7,908	1,312,583	294,110	640,420	71.2

DISCUSSION on MR. RAVENSTEIN'S PAPER.

Dr. NEILSON HANCOCK (of Dublin) said he had listened to the paper with very great interest. He had turned his attention to the question of race, which he thought was not sufficiently appreciated as an element in the government of the United Kingdom. The paper was an extremely able one, and as far as the information was concerned it was most admirably got up. With one or two conclusions he did not agree; but that had nothing to do with the merits of the paper. The point that struck him as extremely important was that in reference to the western part of Ireland. Looking at the figures of the census, it would be found that in Leinster the proportion of population who could speak Irish was 1 per cent. of the whole population, but in Ulster it was 4.6 per cent. That arose in part from a district he was acquainted with, to which the author had called attention, the district in the Newry mountains; it was a small district, and the language was rapidly dying out, owing to the spread of national schools. In Munster the proportion was 27.7 per cent., and in Connaught it was 39 per cent. In two counties in Connaught (Mayo and Galway) the proportion was 56 per cent. The cause was to be found in the defect of the Irish education system, which was voluntary and not compulsory, and which gave no assistance to schools where the patrons objected to the national system of non-denominational education. The greatest diminution in those who spoke Irish only between 1861 and 1871 had taken place in Munster: from 62,000 in 1861 to 34,000 in

1871. In Connaught in the same years the diminution was only from 78,000 to 50,000. Turning to the education figures in the census of 1871 that would be explained. The proportion per cent. between 5 and 16 years of age not attending school was 50 per cent. in Munster, while in Connaught it was 67 per cent. The backward district of Galway was connected with a dignitary of the Roman Catholic Church, who conscientiously differing from the national system, withdrew from connection with it, so that the only State-aided schools in Ireland did not for many years make the same progress in his diocese as in the rest of Ireland. It thus happened that the district of Mayo and Galway showed at present the greatest proportion of Irish speaking inhabitants. No doubt that afforded an opportunity for correction by assistance to schools being extended on a more liberal system, so as to check the unsatisfactory proportion of 67 per cent. of the children of school-age not attending school. In regard to the migration from Mayo and Galway, it was not a permanent migration to England, but a transitory migration for harvest work, and he believed that that migration had led the people to see the great value of education, so that the school as a place acceptable to the people could be easily extended. His knowledge of Irish affairs did not lead him to corroborate the information of people migrating across Ireland from county to county. He thought it was from the extreme west of Ireland that they migrated towards England. (MR. RAVENSTEIN: I said they go by steps. Your transitory migration I do not call migration at all, because they come back to their homes.) Dr. HANCOCK said his impression was that some of the persons migrating to England remained permanently. There was a similar migration from Donegal to Scotland. From North Donegal they went to Derry, and thence across to Scotland, and formed a large proportion of the population there, but the conclusion that all the figures led him to was the one point, that the prevalence of Irish speaking arose now entirely where from some cause the proper supply of schools are wanting. In reference to the promotion of the cultivation of the Irish language, he thought the feelings of the people had not been sufficiently studied. The professors of Celtic established in the Queen's College, at the suggestion of Prince Albert, had all been suppressed; one at least of them ought to have been retained for prelections on Celtic literature and editing Celtic books and Celtic laws. The author of the paper had remarked upon the efforts of the people to get the Irish taught in the national schools, and at the close had spoken very strongly about including such teaching. At the meeting of the British Association in Glasgow, an interesting paper was read by a Scotch gentleman connected with some of the Gaelic schools in the Western Isles, and he said that if the children learnt to read in Gaelic first they always understood English, but if they first learnt to read in English, they always had a limited or parrot-like knowledge of it. This was stated as an observed fact, and therefore he (Dr. Hancock) thought that the teaching of Gaelic or Irish would not at the present day lead to the people speaking Gaelic or Irish only, but to their knowing English also, and knowing better than if taught

English only. He entirely concurred therefore with the author of the paper, that it was wrong to object to Gaelic or Irish languages being taught when this was the case. The English Privy Council had sanctioned the teaching of Gaelic, and the Education Code for 1878 provided that Gaelic might be taught during school hours by a person qualified for the purpose, so that the Scotch Education Board had been following the same course as the Irish National Board. He thought that Prince Albert had set a very wise example, which might well be followed, of cultivating the feelings of the Celtic speaking races.

Mr. H. MONCREIFF PAUL said he had listened to the paper with very great interest. There was one point, however, that had not been brought out, and that was the reason why the Celts were found in the west and in the north. Mr. Ravenstein had given no reason why the Celts should be found in Wales, in the west of Ireland, in the west and north-west of Scotland, and in the Isle of Man. He (Mr. Paul) believed that it was because in old times they were driven by stronger tribes from the sun rising to the sun setting. The idea he wished to express was a driving away of the weaker by the stronger from east to west and also to the north. Alluding to the question of teaching Gaelic in the schools, he thought the education department for Scotland had gleaned information which would show very much what the writer of the paper had endeavoured to prove, namely, that it was desirable in the first instance to teach pupils Gaelic in order that they might learn English. In response to a circular sent by the education department of Scotland in 1876 to 103 school boards, replies had been received from 90, and of these there were in favour of Gaelic education in the schools 65 and against it 25, proving that they considered, from practical experience, that it was better to teach Gaelic first, in order that the children should afterwards learn English. Then there was a further inquiry made as to whether there were Gaelic teachers available for this purpose, and there were 53 returns showing that Gaelic teachers could be procured and only 14 that they could not, proving that there was no difficulty in carrying out the plan. But unfortunately full returns from all the school boards were not received, consequently information was obtained with regard to 16,331 children only; an estimate would therefore have to be made as to the number in cases in which no answers had been returned. This would bring the number up to about 24,000 children. One or two points had been alluded to with regard to Argyllshire. The writer of the paper had said that there was a portion of the inhabitants of the north of Ireland who spoke the same Gaelic as was spoken in Cantyre in the south of Argyllshire. That might be so, but he had never heard it definitely stated. From the fact, however, of there being a great migration from the north of Ireland to Cantyre, it was well known that there was a similarity of dialect, although they did not speak precisely the same Gaelic. Mr. Ravenstein had very properly alluded to there being a majority of English speaking people in Cantyre. That could be accounted for by the migration from Ayr-

shire, which might be regarded first from an agricultural point of view, and secondly from a distilling point of view. Campbelltown, the chief town in Cantyre, was famous for the distillation of whisky; and the distillers to a man were Lowlanders and not Highlanders; the descendants, in fact, of the old Ayrshire smugglers. With regard to Perthshire, Mr. Ravenstein had drawn a fair line between the Gaelic and Lowland speaking populations. He (Mr. Ravenstein) had said that only in Strathfillan was Gaelic spoken to any great extent; but he might have included the district of Balquhidder. (Mr. RAVENSTEIN said that he had included Balquhidder.) Mr. PAUL continued that it had been stated in the paper that Strathfillan was the only part of Perthshire where Gaelic maintained its ground; but he (Mr. Paul) held that it maintained its ground also in the district of Balquhidder. One very pertinent question might be asked as to what was the real advantage to the community of Gaelic being perpetuated either in Ireland or in Scotland. Enthusiasts who had promoted the establishment of a Celtic chair in Edinburgh, would contend that it was a great advantage that Gaelic should be studied and that there should be a Gaelic chair in the university, not for practical purposes, but for the same reasons as one should study Sanscrit, with the idea of obtaining information with regard to the ancient philological history of this country. He did not see that that was a sufficient reason why the study of Gaelic should be perpetuated. There could be no doubt that all who were alive to their own interests in the Highlands of Scotland preferred learning English, and they acquired it in different ways, partly by migrating among those who spoke only English, and it was well known that the highlanders of Scotland, although they understood English very well, preferred to conceal their knowledge of it, in order that, under the guile of ignorance, they might get information from those who spoke English, who all the time believed that what they said was not understood.

Dr. C. E. SAUNDERS wished to ask the author of the paper how he could explain the fact stated, that in Inverness, where the population was 71,000, of whom 68,000 spoke Gaelic, or a proportion of 95 per cent., the purest English in any part of Scotland was spoken.

Mr. CORNELIUS WALFORD said that on this particular occasion he neither represented England, Scotland, nor Wales, but he wished to suggest a use to which the maps accompanying the paper might be applied apart from the philological aspect of the question. He thought that anyone who studied these maps, assuming they were to be published in the *Journal*, or elsewhere, and took up some of the social questions which might arise from a careful perusal of the paper, would find facilities for obtaining a great amount of information not previously available in any well defined shape. The Gaelic population had been localised for the first time, and, in his opinion, it would be a matter of great interest to take up the general questions of education, the statistics of birth

and marriage rates, as also death rates, and still more important questions of crime and intemperance, with many other cognate questions which this Society was in the habit of inquiring into. If Mr. Ravenstein could be induced himself to follow up these social aspects so much the better; but whoever entered upon the inquiry, a large amount of information would be obtained of various kinds which had not hitherto been made the subjects of inquiry in regard to race. Those acquainted with "Green's History of the English People"—a book still too little known to advanced students—would be aware that these maps would throw a great deal of additional enlightenment on the manners, customs, and habits of the early inhabitants of this island—points which careful readers of this work would know had in the past influenced our national destinies, and which probably were still at work in our midst, but which required the aid of statistical inquiry for their complete unravelment. In truth, he was becoming more and more convinced that history very frequently found its true exponent in statistical science, while on the other hand statistics themselves were very apt to lead to conclusions very fallacious unless interpreted by the light of history. Buckle had shown some recognition of this fact in his "History of Civilisation."

PROFESSOR JEVONS said he wished to ask Mr. Ravenstein what he exactly meant by English speaking people and Celtic speaking people, because he could not gather what the meaning of those two terms were from the paper. He would ask what was the test as to whether anyone was a Gaelic speaking person or a non-Gaelic speaking person—whether it was the usual habit of speaking or the power of speaking it when occasion required? Mr. Ravenstein had brought before the Society a very important question, with an amount of research that had left nothing to be desired. He agreed with Mr. Walford that it was not simply a curious question. As Dr. Hancock had already said, it was mixed up with a great many important social questions, and he (Professor Jevons) apprehended that if the effect of migration to the different places referred to was thoroughly gone into, both as regards the present time and as regards the past, and some idea were obtained of the average composition of population, a key would be obtained to a great many perplexing questions. The rates of mortality and the degrees of drunkenness of the northern towns were facts which could not be at present explained, and he believed the real explanation was to be found in the ethnographic character of the people. It would be found that the migration was going on to a greater extent than had been supposed. The Irish migrate into England, but it was doubtful whether they migrated out of it again. Now if the Irish should continue to migrate into England and the English migrated to Australia, and all parts of the world, the result would obviously be that our population would become Celticised.

Mr. T. W. HANCOCK said that the author of the paper had given him very little opportunity for criticism, because in condensing his paper he had given so small a portion of time to Wales. The

author had said that the Welsh speaking population amounted to 1,006,450, and he wished to know if that included the Welsh speaking population in England? (Mr. RAVENSTEIN said that it did.) Mr. HANCOCK said that he had heard that the Welsh speaking population in London amounted to the population of the town of Cardiff, which, according to the last census returns, amounted to 59,000. He believed the Welsh speaking population in England would amount to about 100,000; at the same time he must say that it was a difficult matter to ascertain the number of the Welsh speaking population in England, but he thought it would amount to a larger figure than 62,000. He had glanced over the paper and found that in all the facts and figures, both as regards North Wales and some portion of South Wales (with which he was acquainted), the author was exceedingly accurate. It was only lately that the question as to the boundary of the English speaking population in Montgomeryshire had been settled. As to the practical question, the Welsh people considered the English language to be of more practical utility than the Welsh, although they had a very tenacious grip of their own language. He thought that at the present day the Welsh people had a stronger hold on the Welsh language than ever they had. There were no doubt a good many school boards where the business was entirely carried on in Welsh, and yet they encouraged the teaching of English; in fact, the members of the school boards in Wales in many cases understood very little English themselves. He thought there were about fourteen newspapers wholly in Welsh published in Wales and not one in England, and about twenty monthly periodicals, besides two quarterlies; these were more or less connected with religious denominations. Taking the monthly periodicals, there were about three periodicals per denomination.

Mr. RAVENSTEIN in reply said that he had used his best efforts to find out the truth as regarded the number of persons who spoke Welsh or Gaelic. He carefully weighed the information supplied to him by numerous correspondents, and believed the figures presented would on further examination prove to be a fair approximation to the truth. In making his estimate of Highlanders residing in the Lowlands he compared the birth places of the people, as given by the Registrar-General, with the proportion of persons speaking Gaelic as ascertained by himself for the Highland counties, and although this might be a rough way of arriving at the truth, it was the only one open to him. This comparison clearly brought out several facts connected with Highland migration. It showed very clearly, for instance, that in Elgin and Nairn, the Gaelic was kept up solely by immigration from the west. He thought that the number of Welshmen residing in England, and able to speak Welsh, could not exceed 62,000. Much higher figures had been given. As to the number of Welshmen and Highlanders able to speak English, he felt constrained to accept the statements made by his correspondents, some of whom probably over-estimated their number. But by taking the average of several parishes, he had endeavoured to eliminate errors. He hoped our next census would supply more exact

information than that now placed before the Society. Some of the gentlemen to whom he applied for information fancied he took up this subject in a partisan spirit, for in Glamorganshire more especially, the linguistic question was now being discussed with some acrimony. He need hardly say that his sole object had been to ascertain the truth. In answer to Mr. Walford he might state that the maps exhibited this evening, and copies of which would be published in their *Journal*, merely gave the general results of his inquiry, but that he proposed to publish more elaborate maps on a larger scale. He thought this question of languages was one of those practical questions which was more especially deserving the attention of a Society like theirs. A thorough knowledge of the geography and statistics of the land we live in, must prove in many instances of greater immediate advantage than anything we might learn with respect to foreign countries. As to the pure English spoken at Inverness, referred to by Mr. Saunders, he might say that the people there had in a large measure learnt their English from books, and consequently spoke it without accent. Similarly, the lowland Germans generally spoke purer German than those of upper Germany, whose dialects bore a greater resemblance to High German. Indeed, the best German was said to be spoken in the Baltic provinces of Russia. Referring to the education question, it might be asked what advantage would be secured in teaching Gaelic, or Irish, or Welsh. He thought the advantage would be very great, for these languages are the only means of reaching many thousands of children, utterly ignorant of English. In Ireland, Gaelic was not only to be taught in the schools, but the Commissioners were prepared to pay handsomely, whilst in Scotland, although permission had been granted to teach Gaelic, no money grants were to be made. In reference to the question of migration, he had considered that subject at length in a former paper, a copy of which he would send to Dr. Hancock. His figures he thought showed very clearly in what manner large and growing towns sucked up the population around them, their influence growing less and less with the distance, always allowing for facilities of access and other disturbing elements. In Ireland, migration certainly set eastwards, the great points of attraction being Liverpool and Glasgow.

MR. H. MONCREIFF PAUL thought that the reason why so pure English was spoken in Inverness, lay in the fact that English soldiers were quartered there a great many years ago, and the inhabitants then learned English from these English soldiers and not from those coming from the lowlands of Scotland. They thus gradually interlarded English with the native Gaelic; consequently, though there might be purity of language, there was a peculiarity of accent almost identical with that observable amongst the peasantry of certain districts in Norway.

THE CHAIRMAN (SIR RAWSON W. RAWSON), in proposing a vote of thanks to Mr. Ravenstein, said that the present paper, in connection with the one previously read before the Society by

Mr. Ravenstein upon migration (and which he had had the pleasure to study), would be of great social value. If anybody would be at the trouble to take up the figures, and work out the details of the social life in connection with the origin of the people, very valuable results for the legislature might be expected. Two lessons might be learned from the paper: one was with regard to the past. The change in the language of the people was not confined to Ireland, and was not the result of English action in Ireland specially, but the result of natural causes. Mr. Paul had thrown out the idea that the native population was driven from east to west, as if the position of the sun had some influence upon their movement; but it was as clear as possible that it was the action of the civilised races entering from the south and the east, and driving the natives further back. Wealth accumulated first in the east, and so became a source of attraction. There were two sources of action: the wealth penetrating westward, and the wealth attracting the poorer classes from the different parts of the United Kingdom to its centre. So far it was like the sun. It might be said that it was the sun of wealth and civilisation, of learning and art, of increasing population, and everything that grew first in the east and south of England which had attracted the natives from Wales, Scotland, and Ireland, and the degree in which the Gaelic language had changed in those three sections of the United Kingdom had been apparently in proportion to the social position and means of producing a competence and comfort at home. In Wales the mode of settlement and the mode of division of land had left the people contented and less attracted to other places than the Scotch in the Western Highlands, and the Irish from the extreme west, and he thought that it was in correlation to the character and social position of the three races in those three parts of the United Kingdom that the change in the language had been brought about and was still in operation. The other lesson was, that societies might as well attempt to stem the tide of the ocean as to prevent the people in the whole of the British islands from gradually acquiring a knowledge of English. Most desirable it was that the children in the schools should be led from the known to the unknown, and also that the record of the language, the habits, and the literature of our forefathers should not be lost; therefore, wishing all prosperity to the societies in Ireland and Scotland engaged in this useful work, he thought it was a hopeless task for them to endeavour to preserve as the vernacular the ancient languages spoken by the people of those countries.

ON TABULAR ANALYSIS. By WILLIAM A. GUY, M.B., F.R.C.P., F.R.S.,
one of the Honorary Vice-Presidents of the Statistical Society.

[Read before the Statistical Society, 17th June, 1879.]

ON the 18th of June, 1860, I submitted to the 6th Section of the International Statistical Congress, then holding its fourth session here in London, a paper on "Statistical Methods and Signs." Lord Houghton (then Mr. Monckton Milnes) was in the chair, M. Quetelet was present, and Mr. Babbage, Mr. Samuel Brown, Admiral Fitzroy, Sir John Bowring, and Dr. Schubert, from Prussia, were among those who took part in the discussion. The importance of the subject was generally recognised, and Mr. Babbage took occasion to point out in a special manner the life-long industry and talent which M. Guerry had devoted to it.

The title of my paper on that occasion was, as I have stated, "Statistical Methods and Signs." I have adopted as that of my present communication "Tabular Analysis"—a section only of that larger subject. My reason for this curtailment is partly the impossibility of treating the entire topic in the short time allotted to the reading of our papers, and partly (but still more) the opinion I have long held, even before the congress of 1860, that we ought to have somewhere in the pages of our *Journal* some account of the ingenious and truly practical suggestions respecting Tabular Analysis made by Dr. Todd, of Brighton,* nearly fifty years ago.

From the title of Dr. Todd's work, which I give in the footnote, you will infer that he himself was deeply convinced of the importance and wide application of his method. He speaks of it too as of one that he had himself employed; and, indeed, he places it before his readers in that abstract form which men are apt to resort to when the subject of which they treat, being thoroughly comprehended by themselves, seems to them as if it must needs be equally clear to the rest of the world. This is the only likely explanation of the fact that among some three score or so of tables built up of columns filled with letters and numerals, there is not to be found a single example of the application of his method to any definite inquiry. We have chapters devoted to

* "The Book of Analysis," or a new method of experience, whereby the induction of the *Novum Organum* is made easy of application to medicine, physiology, meteorology, and natural history; to statistics, political economy, metaphysics, and the more complex departments of knowledge. By Tweedy John Todd, M.D., of the Royal College of Physicians of London, &c., &c., 1831.

medicine; to what the author terms an analytical hospital; to medical analysis; to physiology; to phrenology, animal magnetism, and homœopathic medicine; to the useful arts, chemistry, and meteorology; to natural history; to the analysis of testimony; and, finally, to statistics and political economy; but not a single illustration by which to recommend the method to persons of ordinary intelligence.

And yet, up to a certain point, the tables are intelligible enough. All the circumstances to which a table relates—say the circumstances are the symptoms of a disease—are written down at the left hand of the table in a series of horizontal spaces, while the instances (being cases of the disease in question) are indicated by numbers at the head of a series of vertical columns, twenty, or less, in number. The body of the table bristles with letters of the alphabet, the letter A standing under the figure 1, B under the figure 2, C under the figure 3, and so on till the figures at the head of the table are exhausted. The letters of the alphabet are called signs, and this is the use to which these signs are put:—All the symptoms present in the first case, written down in the horizontal spaces on the left, are marked in the first vertical column devoted to case I by the letter A, and that letter becomes the sign of that symptom in every subsequent case. Let us now suppose that in the second case, one or more new symptoms are observed, such new symptoms are entered under the letter B in the second column, and the letter B becomes the sign of that symptom in every subsequent case. So of the new symptoms in the third case, and so of the fourth, and all the remaining cases.

This method, then, may be briefly described as a method of tabulation, by which words and short descriptive sentences (such as the symptoms of a disease) are converted into signs, consisting of the successive letters of the alphabet, which signs have this property, or peculiarity, that each corresponds to a case observed and recorded, and is consecrated, so to speak, to the same symptoms in that and in every succeeding one; so that it appears on the very face of the table in which of any series of cases any symptom was first observed, while a simple process of addition gives the number of cases in which the symptom in question was ascertained to be present. The A's, if all were filled in, would correspond with the entire number of cases, the B's with that number less one, the C's with that number less two, and so on of the rest. Assume the words or short sentences descriptive of the several symptoms to be well chosen, and the letters to be correctly set down in the vertical columns, and we have a condensed and singularly accurate view presented to us of the symptoms present in a series of cases. Translate the signs back into the words or phrases which they represent, and sum up the signs as they appear in the horizontal

columns, and we have a true history of the disease, with the relative importance of its symptoms, as far as that can be measured by frequency of occurrence. Each vertical column shows the symptoms present in one case.

But the description of this form of table will obviously be incomplete unless we take into account the fact that certain cases of disease are marked by the absence of symptoms present in others. The blank spaces in the table indicate such absences, and it is part of Dr. Todd's plan to fill in these blanks with smaller letters of characteristic type, which then become signs of absence, as the larger letters were of presence of the symptoms indicated by the signs. Now here I notice a serious defect in the method. It provides for the due representation of a symptom as either present or absent, but it does not indicate what, in all analyses of recorded facts, is of the utmost possible importance, what symptoms the recorder of the case has omitted to mention, and what symptoms he distinctly states to have been absent. This omission is, of course, easily remedied. The large Roman letter indicating any given symptom, each blank space may be taken to indicate the absence of all mention of the said symptom, and the small Italic letter the *stated* absence of that symptom. So that we have as the ultimate result what we certainly need, a distinct setting forth, in signs convertible into words or phrases, of every instance in which any symptom has been noted as present, noted as absent, or simply overlooked. (See the first table in the Appendix.)

But this is not the only improvement of which Dr. Todd's method is susceptible, without introducing into it too much complication, and running the risk that the instrument we are using will break down by its own weight of details. It is obviously quite possible and feasible to make the signs express not only presence, or stated absence of the thing signified, but its intensity. We may safely attach to the signs three marks of intensity corresponding to three terms in common use—*maximum*, *minimum*, and *mean*, represented by the three figures 3, 2, 1; or if we assume the absence of any numerical qualification to indicate the common or average state of things, then the figure 3 will correspond to all words implying high intensity, and the figure 1 to all words implying the opposite state.

There is of course nothing in the form of the table to prevent the insertion of figures in lieu of letters. Instead of A, B or C, we may write down the exact number of the pulse or breathing, or the temperature as ascertained by the thermometer. (See the second table in the Appendix.)

I will not run the risk of wearying you by explaining the expedients by which Dr. Todd joined table to table, when any

inquiry ran on to great length, when it embodied a great number of circumstances, or extended to a large array of instances. What I prefer to do is to assume that I have appreciated the method put forward by Dr. Todd, and that ever since the period of its publication I have been making practical application of it first for one purpose then for another, modifying it as I deemed it necessary, sometimes taking something away which seemed needless, sometimes adding on what appeared wanting. Bear with me while I try to set down in few words the results of my experience, and forgive me if, in following out my own train of thought, and trying to lay some sort of foundation for a well-considered thesis on Tabular Analysis, I do not stop to trace to its earliest source every simple and obvious suggestion which may have been made in this country or abroad. I seek to give a connected account of my own thoughts and experiences, not to claim for them the merit of originality.

I approach my subject by laying down a few obvious considerations respecting the facts with which the statist has to deal.

The *units* of the statist are either *simple units*, such as a birth, a death, a marriage, a crime; or *units of variable magnitude*, such as an age at death, a man's stature or weight, a wage, a fortune.


Units whether of the one kind or the other, are the elements of which our sums are made up, and the units of the second order supply, in the shape of maximum, minimum, and mean results, subjects of interesting inquiry, such subjects as Quetelet delighted to investigate and illustrate. Under this heading fall the weight and stature of man, and the age at which he performs those acts that confer credit or entail blame and punishment.

Units of variable magnitude again, when brought into contact with the element of time, present to us the phenomena of the pulse and breathing, and, indeed, of the leading signs and symptoms which constitute the state of health, or the countless maladies to which body and mind are subject. These same units of variable magnitude, associated with periods of days, weeks, months, years, supply the materials of those returns of mortality of which we make such large and frequent use.


Other simple units, or units differing only in numerical value, form the elements of those countless returns, which, when they relate to matters that interest the State are rightly called *Statistics*; and these returns assume as a rule, the tabular form.

There was a time when masses of figures were mixed up and blended with the letterpress, as indeed they now are in newspapers and other publications in which the extra cost of tabular arrangement is a bar to its use. The first step towards a better state of things was taken when figures were extricated from the letterpress which entangled them, and marshalled in order with such words

only as were needed to keep them together. The next step was to recognise the space created by the intersection of a horizontal and

vertical column as——convenient for inscribing some

number springing, so to speak, out of that union:—say a return of the deaths occurring at a particular place or time. To multiply the two sets of columns, and to place at the head of each set the shortest form of words expressive of the points to which the

figures relate, —was the first natural development of

what may be fitly termed the tabular idea: and I have often thought that the man who first so arranged masses of figures was unconsciously conferring the same benefit on the arithmetician, the actuary, and the statist as the man who invented a wheel did on the whole tribe of mechanicians.

The tabular form once introduced would present an example of condensation which could scarcely fail to stimulate the invention of symbols or signs, which should to the greatest possible extent, take the place of words and sentences. Not only would the signs to which the mathematics owe so much (such signs, I mean as +, —, =, &c.) be brought into use, but others would be invented. The letter *M* would stand for mortality in inquiries relating to deaths; and figures (such as 1, 2, 3), would be made to stand for the least, the mean, and the greatest values, or 2 and 1 for small and very small, 4 and 5 for great and very great, or for all words having similar meanings. This process of condensation of words and sentences into *symbols* and *signs*, may be said to have reached its climax in the method of Dr. Todd, in which the letters of the alphabet are made to take the place of words and sentences expressive of symptoms of diseases during life, and of appearances in the body after death, and, indeed, of all possible groups of circumstances to which men of science devote their attention.

But, as I am now endeavouring to treat the several forms which Tabular Analysis may be made to assume, and not only of Dr. Todd's method, I must here remark that his method appears to be framed throughout on the assumption that, in entering upon any inquiry by the aid of his tabular forms, he is ignorant of the number and extent of the circumstances which he may have to comprise in his investigation. He accordingly makes provision for encountering a succession of new and unexpected circumstances in the several instances submitted to analysis. Now it is obvious that, among the inquiries which we may desire to conduct by means of tabular

analysis, there are some in which we know the exact extent and limits of the points to be tabulated, so that our table from the first assumes the form which it retains till the inquiry is complete, and we are able to dispense altogether with the letters, of which the chief use in Dr. Todd's form of table is to mark the point at which some new circumstance or symptom presents itself for observation. Any mark to which we can attach signs of intensity will here answer our purpose. I have preferred a cross, thus \times , \times^1 , \times^2 , \times^3 .

I will take for an example the inquiry entrusted to me in the year 1862, into a subject which is again, and not without good reason, attracting public attention. I mean the effects of the poison known as emerald-green when used in the Arts. After having made myself familiar with the effects of this poison in several classes of persons exposed to its operation, and become acquainted with all the symptoms which it occasions, I prepared a skeleton form in which all those symptoms were written one under another in the horizontal columns of circumstances, and numbered the vertical columns from 1 up to the convenient fraction of an hundred, 25. I addressed to twenty-five young women working with emerald-green in the same manufactory of artificial flowers, the questions I had prepared, in the same form of words, noting down the answers by a cross when the symptom was present, leaving a blank space when it was absent, and indicating the intensity of the symptom in every instance by the figures 1, 2, 3, attached to the cross. By this simple procedure I need not say that I both largely economised time, and secured the utmost accuracy attainable. Need I add that, when I came to translate the condensed table thus built up into a running verbal description, I realised an accuracy and precision which no loose method of observation could have conferred. Had I adopted the usual plan of committing to writing the particulars of each case as stated to me on the spot, I should have wasted time, and been lost in a maze of words, from which I could only have extricated myself by resorting to some form of tabulation, or some equivalent, but more laborious, process.*

But the cases in which we shall find it convenient to dispense with the use of letters and the method of Dr. Todd, are not of frequent occurrence. As a rule, it is best to adopt a tentative plan, that is to note under the letter A the circumstances of the first instance, under B the new circumstances of the second instance, under C those of the third, and so on. I may mention as cases in which I have resorted to the method with advantage, the comparison of conflicting evidence given in a court of law, in which the statements of the witnesses figure as circumstances, and their

* See the "Fifth Report of the Medical Officer of the Privy Council," 1863, p. 149.

names in the columns of instances.* I may also suggest to any one desirous of testing the method on a small scale, and as applied to historic records, the opportunity offered by the four gospels. If we begin by placing at the heads of the columns of instances, first the two gospels bearing the names of eye-witnesses, then the two which do not claim that high authority; and if, taking them in hand one after the other, we enter the words which they severally use in the column of circumstances, and mark their presence by a cross or letter, we obtain a clearer view of the true state of the case than the best harmonies constructed on ordinary principles of tabulation afford. I speak from repeated experience of Todd's method so applied.

Of the appearance which tables constructed on Dr. Todd's principle present when his method is applied to such matters as poisoning by arsenic and by strychnine, the cases submitted to analysis being taken from printed records by observers having no previous concert with each other, or agreement as to the symptoms to be looked for, you have examples before you. They embody, as you will observe, all the particulars to which I have called attention—the symptoms present in the first case and those added in every subsequent one, together with their intensity as far as numerals can be made to express the force of words in common use, and a summary of results in all their details. In the table devoted to the symptoms of poisoning by strychnine you will see that I have grouped together those symptoms that are most nearly allied; and I have attached to it a rough sketch of an inquiry in which the element of colour is introduced, the words and letters in red ink relating to poisoning by strychnine, those in black to cases of tetanus. The table first named will be found as Table II in the Appendix. It shows all the symptoms recorded in the printed histories of 20 cases by different observers, acting without concert, or previous understanding as to the symptoms to which their attention ought to have been directed. It will be seen that, in the first case, five symptoms only are put on record; in the second, five additional symptoms; while in the ninth case, of which the letter I is the symbol, no less than eleven distinct symptoms were noticed and recorded. It will be seen that this case was that of a young female, who recovered. It was a case of homicide. The dose was large, the symptoms showed themselves soon after it was swallowed, and were, for the most part, very severe. There was incessant vomiting, and the matter vomited contained blood, intense pain in the epigastrium, and excessive thirst. There was profuse diarrhœa, and the motions contained blood. There was intense headache, and

* I found the method singularly useful in compiling an account of the Tichborne Case.—("Forensic Medicine, Appendix," p. 685.)

extreme debility, with hysteria, convulsions, and tetanic spasms. This is what we learn from the signs or symbols of one vertical column, translated into the words they represent. If we run the eye along the horizontal columns, we learn that vomiting, pain in the pit of the stomach, thirst, and diarrhoea are the leading symptoms of poisoning by arsenic; that the vomiting is often, but not always, excessive; that the pain in the pit of the stomach is generally acute, but that it may be moderate, or slight, or even absent; that to the rule that the thirst is excessive, there are exceptions (it may be moderate, it may even be absent); that the same is true of diarrhoea; and that acute headache and extreme debility are also among the prominent symptoms, though both may be less strongly marked. Other information of greater or less interest may be gleaned from the first five lines.

To make full use of such a table as this, it must be accompanied by an exact record of the printed sources from which the cases are taken.

The post mortem appearances may, of course, be treated in the same way.

It is obvious, too, that such a table as this may be readily converted into the history of a case, in which table the figures at the head of the vertical columns will stand for successive days, and the letters will indicate the symptoms present on the first day, with the new symptoms on the days when they first make their appearance. The sex and age of the patient, the issue of the case, and such symptoms as the pulse, temperature, &c., would make their appearance at the head of the table. Each case would bear its number, and an index of date, name, residence, &c., would be attached to the collection of cases.

I am warned, partly by the flight of time, and partly by the unattractive nature of my subject, that I must bring this paper, with all its manifest imperfections and shortcomings, to a close. For reasons known to the Council it is the issue of a shorter period of preparation than I would have willingly devoted to it. But it will have answered its main purpose if it secures a place on the pages of our *Journal*, for an account, too long delayed, of a most ingenious method of tabular analysis, and one which any man of common intelligence may employ though he may lack the higher culture of the mathematics. I do not think that I attach undue importance to tabular analysis, or the discovery of truth by means of tabular forms, as distinct from tables of record and tables of illustration, when I anticipate from their intelligent and more extended use, not only greater accuracy of statement and completeness of description, but discoveries of the utmost interest and importance. Men, and the things they do and suffer, are equally the products of

many factors acting in succession or simultaneously; and experience justifies us in expecting that, little by little these factors will be isolated from the tangled thread of causes, leaving the remnant more amenable to scientific treatment. Just as a happy coincidence of a lower and a higher temperature following fast on each other in the depth of winter, gave to the younger Heberden the opportunity of discovering the connection of a low temperature with a high mortality from lung-disease—a connection so often demonstrated by our esteemed colleague Dr. Farr—so will other coincidences, utilised with like skill, lead to the elimination one by one of the other factors of mortality, until at length we come to understand how it is that in extent of annual fluctuation the causes of death exceed all other events whatever, whether those events be within or beyond the control of the human will. So will it doubtless be with the factors that determine the annual fluctuations in crime. But what need is there of singling out this or that phenomenon from the multitude that present themselves at every moment and in every place! We, in common with the astronomer, the microscopist, the chemist, have our facts with which to deal, our instruments with which to observe and experiment, our happy opportunities and felicitous conjunctions. Like them, we can improve our methods, extend the powers of our instruments of research, widen the field of our observation, and advance with sure step, though with many a hindrance, up that hilly path which leads (to use the words of our own Harvey) “through devious, but most assured ways,” up to the “citadel of truth,” struggling on from lower to higher levels, till at length we penetrate into “the heart of her mystery.” It is towards that citadel so lofty and so hard of access that we are working onwards with the best facts we can procure for our material, the best tabular forms we can devise for our tools, and with the old confidence in the power of industry and intelligence, and trained co-operation to overcome the obstacles that beset all the paths of science, and none more than those in which we tread, who lay claim not so much to a well-defined science, as to a vast aggregate of knowledge into which scientific methods and scientific treatment are ever introducing more and more of order, more and more of light.

APPENDIX.

TABLE I.—*Tabula Inveniendi.*

Subject of Investigation.	INSTANCES.																				Summary.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Circumstances ...	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
	A	A	A	—	A	A	A	—	A	A	—	A	—	A	A	—	A	A	A	A	15 A
	A	A	A	A ¹	A	A	A	—	A	A	A ¹	A ¹	A	A	A	A	A	A	A	A	16 A, 3 A ¹
	—	B	—	B	—	—	—	B	—	—	B	—	B	—	—	B	—	—	—	—	6 B
	A	A	A	—	A	A	A ¹	A	A	A	—	A	—	A	—	A	A ¹	A	A	—	13 A, 2 A ¹
	—	—	C	—	—	C	—	—	—	C	—	—	C	—	—	—	—	—	C	C	6 C
	A	A	A	A ²	A	A	A ²	A	A	A	A	A	A ²	A	A	A	A	A	A ²	A ²	14 A, 5 A ²
	A	—	A	a	A	—	a	—	A	—	—	A	—	—	a	a	—	—	A	A	7 A, 4 a
	—	—	—	—	—	F	—	—	—	F	—	—	—	F	—	—	—	—	F	—	4 F
	—	B	—	B	—	—	—	B	—	—	—	—	B	—	—	B	—	—	—	—	5 B
	—	—	—	—	—	—	—	H	H	—	—	—	H	—	—	—	—	H	—	—	4 H
	A	A	A	A ³	A	A	A	A	A	A ¹	A	A	A	A	A	A ¹	A ¹	A	A	A	16 A, 3 A ¹ , A ³
	—	—	C	—	—	C	—	—	—	C	—	—	—	C	—	—	—	—	C	C	6 C
	—	—	—	—	—	—	—	—	—	—	K	—	K	—	—	K	—	—	—	—	3 K
	A	A	A	A ¹	A	A	A ¹	A ¹	A	A	A ¹	A	A	—	A ³	A	A	A	A ³	A	13 A, 3 A ¹ , 3 A ³
	—	—	C	—	—	C	—	—	—	C	—	—	—	—	—	—	—	—	C	C	5 C
	—	—	—	D	—	—	—	—	—	—	—	D	—	—	—	—	—	—	—	—	2 D
	A	A	A	A	A	—	A	A	A	—	A	A	A	—	A	A	A	A	—	a	15 A, 1a
	—	B	—	B	—	—	—	B ³	—	—	B	—	—	—	—	—	—	—	—	—	3 B, 1 B ³
	—	—	—	—	—	F	—	—	—	F	—	—	—	—	—	—	—	—	—	—	2 F
	—	—	C	—	—	C	—	—	—	c	c	—	—	—	—	—	—	—	C	C	4 C, 2 c
	—	—	—	—	—	—	—	H	H	—	—	—	H	—	—	—	—	—	—	—	3 H
	—	B	—	B ¹	—	—	—	B	—	—	B ³	—	B	—	—	B ¹	B	—	—	—	4 B, 2 B ¹ , B ³
	—	—	—	—	—	—	—	—	—	—	—	—	M	—	—	—	—	—	M	M	3 M
	—	—	—	—	—	—	—	H	H	—	—	h	—	H	—	—	—	H	—	—	4 H, 1h
	—	B	—	—	—	—	—	—	—	—	B	—	—	—	—	B	—	—	—	—	3 B
	—	—	—	—	—	F	—	—	—	F	—	—	f	f	—	—	—	f	—	F	3 F, 3f
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	T	1 T

Note.—A, B, C, &c. Stated presence of circumstances.

a, b, c, &c. Stated absence of circumstances.

Blanks. Circumstances not mentioned.

A¹. Circumstances existing in slight intensity, answering to words *some, slight, somewhat, &c.*

A². Circumstances existing in moderate intensity, or in degree not stated, answering to words *moderate, usual, average, &c.*

A³. Circumstances existing in great intensity, answering to words *very, excessive, intense, &c.*

TABLE II.

Poisoning by Arsenious Acid.	CASES.									
	1	2	3	4	5	6	7	8	9	10
Symptoms	A	B	C	D	E	F	G	H	I	K
Sex and age (M male, F female, } Y young, sex not stated) }	F	M	F	M	17 M	52 M	50 F	48 F	Y F	Y F
Accident, suicide, or homicide	H	H	H	H	H	H	H	H	H	H
Dose (L large, S small)	L	L	L	L	S	S	L	L	L	L
Commencement of symptoms	—	—	—	—	1 hr.	soon	imm.	$\frac{1}{4}$ hr.	soon	soon
Event (R recovery, D death)	R	R	R	R	R	R	R	R	R	R
Vomiting	A	A ³	A	A	A ³	A ³	A ³	A ³	A ³	A ³
„ of blood	—	—	—	—	—	—	—	—	I	I
„ of bile	—	—	C	—	—	—	—	—	—	—
„ of fæces	—	—	C	—	—	—	—	—	—	—
Pain in epigastrium	A ³	A ³	A ³	A ³	A ³	—	—	A	A ³	A ³
„ abdomen	—	—	—	—	E ³	—	E	—	—	—
Thirst	A ³	A ³	A ³	A ³	A ³	A	A ³	—	A ³	A ³
Diarrhœa.....	—	B ³	B	B	B ³	b	b	B ³	B ³	B ³
Discharge of blood by stool	—	—	—	—	—	—	—	H	H	H
Hysteria	—	—	—	—	—	—	—	—	I	—
Headache	A	A ³	A	A	—	—	—	—	A ³	A
Vertigo	A	A	—	—	—	A	—	—	—	—
Debility	—	B ³	B ³	B ³	—	—	—	B	B ³	B ³
Coma	—	—	—	—	—	—	—	—	—	—
Tingling sensation in limbs	—	B	B	B	B	—	—	—	—	—
Spasms and cramps	—	B	—	—	B	—	—	—	—	—
Convulsions	—	—	—	—	—	—	—	—	I	I
Tetanus	—	—	—	—	—	—	—	—	I	I
Epilepsy	—	B	B	—	—	—	—	—	—	—

TABLE II.

CASES.										Summary.
11	12	13	14	15	16	17	18	19	20	
L	M	N	O	P	Q	R	S	T	V	
Y	19			25	20	50		14		8 M + 12 F 11 H + 6 S + 3 A
F	F	M	M	F	F	F	F	M	M	
H	S	S	S	S	S	A	S	A	A	
L	3j	3j	3j ^{ss}	9ij	3j	—	3j	S	—	14 R + 6 D
soon	1 hr.	$\frac{1}{2}$ hr.	$\frac{1}{4}$ hr.	1 hr.	1 hr.	—	$\frac{1}{2}$ hr.	few hrs.	4 hrs.	
R	R	R	R	D	D	D	D	D	D	
A ³	A	A ³	A	A	A	—	—	A ¹	A	9 A ³ + 8 A + A ¹
I	—	—	—	—	—	—	—	—	—	3 I
—	—	—	—	—	—	—	—	—	—	C
—	—	—	—	—	—	—	—	—	—	C
A ³	A ³	A ³	A	—	—	A ¹	A	A ³	a ³	11 A ³ + 3 A + A ¹ + a ³
—	—	—	—	—	—	e	e	e	—	E ³ + E + 3 e
A ³	—	—	—	A ³	a	A ³	a	—	A ³	12 A ³ + A + 2a
B ³	—	—	—	B ³	—	—	b	B	B	7 B ³ + 4 B + 3 b
—	—	—	—	—	—	—	—	—	—	3 H
—	—	—	—	—	—	—	—	—	—	I
A ³	—	—	—	—	—	—	—	—	—	3 A ³ + 4 A
—	A	—	—	—	—	—	—	—	—	4 A
B	—	—	—	—	—	B ³	—	—	—	6 B ³ + 2 B
—	—	—	—	—	Q ¹	—	Q ³	—	—	Q ¹ + Q ³
—	—	—	—	—	—	—	—	—	—	4 B
—	—	—	—	—	—	—	—	—	B	3 B
—	—	—	I	—	—	—	—	—	—	3 I
—	—	—	—	—	—	—	—	—	—	2 I
—	—	—	—	—	—	—	—	—	—	2 B

DISCUSSION *on* DR. GUY'S PAPER.

MR. HEYWOOD said he considered that M. Guerry was the father of the system of illustrative analysis, and by the clear mode of his arrangement had done much to render analysis intelligible to every one. He did not know any illustrations so beautiful as those of M. Guerry's Tables of Population and Education, published some thirty or forty years ago, giving the progress of France and Belgium, and distinguishing by shaded portions the least educated parts of the country, and by lighter shades the more educated districts. It could be seen from the colour in what state the population was in different parts. He was only sorry that Dr. Guy had not adopted more of his tables, with which he was very familiar, such, for instance, as the state of crime, and have shown by additional illustrations how the results may be given statistically in a plain and demonstrative manner. The tables seemed to him to be rather tables of contents, and for them the Society was much obliged to Dr. Guy, and the mode of forming those tables had been well explained.

MR. CORNELIUS WALFORD said that many years ago he had studied Todd's system, and had applied it in those days to various branches of study and inquiry. He had found it in many cases admirable in its application, and in others it was not so. In all physical occurrences it seemed to him to be the essence of everything that was required. He had not of course had reason to apply it to instances of disease; but in instances of crime it seemed to be very applicable indeed, especially when the colour system was associated with it. Dr. Haviland had applied a somewhat similar system to observations on diseases, showing the prevalence of those diseases in different parts of the kingdom, and by means of tabular analysis and of colour he had constructed a set of charts of great value. He was now making a chart of persons killed by lightning, and although these were not investigations of original data, but rather of the returns of the registrar-general, tabular analysis could be, and he believed was actually applied to it: in some stages at least. He took his geological map as a medium of illustration, and showed that few were killed by lightning on the chalk formation, which was very interesting. In a recent paper which he (Mr. Walford) had read before the Society, he had used the analysis of Dr. Todd in arranging the causes of famines, although it did not lead him up to the harmonious results he hoped for rather than expected. But Dr. Todd's system was perfect as far as it went, and was really of very great service. In reference to the sun-spot theory, he would suggest to his friend Professor Jevons that the system of tabular analysis would be excellent. He meant at no distant period to take Todd's system and apply it to the formation of public companies and the causes of panics, and no doubt it would be one of the most instructive modes of tabulating those results. He confessed that the real benefit he had obtained from Todd's system, as also from Gray's and Beneowski's systems of

artificial memory, was in the training of the mind to methods of analysis. He thought that any one taking up Todd's system and working it for a time, would find that his mind would become developed into a form suited to the conduct of original and other inquiries. In that sense alone one could pay a high tribute to Todd's system, and in that sense also it had been sadly overlooked, and it had certainly never been used as it ought to have been as a valuable process in statistical education. They must all feel indebted to Dr. Guy for calling attention to a system which might lead their younger members to study the methods of tabulating results in a way which would always be effective, and which many of them would never have been familiar with except for this exposition of Dr. Todd's and M. Guerry's methods.

Professor JEVONS thought they would all agree that the paper was one which should be very much welcomed. It seemed to him that they should not be occupied entirely with mere facts and particulars, but that a little time should be spent in the consideration of methods and the generalities that belonged to the science of statistics. They ought not to forget they were a scientific Society, and that they treated of methods as well as simple facts. Looking through the paper itself, his own feeling was that its chief defect lay in its being too short. Dr. Guy had only touched a corner of the wide subject. No doubt in former papers Dr. Guy had treated other parts of the theory of statistical inquiry, and the present paper was, to a certain extent, an addition to those papers. He hoped it would not be the last of their papers referring to method. There was in progress—although it was rather slow progress—an abstract of a German work on methods of statistical inquiry by Dr. Mayr. He (Professor Jevons) hoped that Englishmen would not allow themselves to fall behind other nations as regards the study of these methods. Mr. Walford had spoken of the application of tabular analysis to the sun-spot question, but he thought another method was more applicable to this question, a method which was the natural complement to the tabular method, namely, the curvilinear or graphic method. Dr. Guy had introduced into his tables the numbers one, two, three. That was a numerical variation, and when carried out into higher numbers, it introduced them into the curvilinear method. They had heard a good deal about Dr. Todd and his book: but Englishmen lost sight of the fact that William Playfair, who had never been heard of in this generation, produced statistical atlases and statistical curves that ought to be treated by some writer in the same way that Dr. Guy had treated the method of Dr. Todd.

He should like to ask Dr. Guy a question in reference to the *Tabula Inveniendi*. The diagram shown in the room differed from the printed table. In the diagram there were only capital letters, and in the printed table there were both capital letters and small italic letters. They could not both be the method of Dr. Todd; perhaps one was Todd's method, and the other was Dr. Guy's; but the difference was one of considerable theoretical importance, because, curiously enough, the difference of the capital and italic

letter was that which was employed by De Morgan in his logical system to express the presence and absence of a quality or term. It was obvious that a blank space ought properly to signify ignorance. If the letter A signified the presence and the blank space the absence, then there were no means at all of signifying that nothing was known on the subject. Perhaps Dr. Guy would explain how the difference between the two tables had arisen.

Dr. GUY, in answer to Professor Jevons, said that the table to which the speaker referred was one in strict illustration of Dr. Todd's method; while that which would be found at the end of his paper when it came to be printed, embodied the improvements to which he had referred, namely, letters in smaller type indicating the stated absence of the thing represented by the larger letter, as well as the numerals 1, 2, 3, indicating maxima, mean, and minima. It was a defect in Dr. Todd's method that it did not distinguish these different things—the stated presence, the stated absence, and the omission of all mention of the fact or circumstance of which the large letter showed the stated presence and the small letter the stated absence.

Rev. I. DOXEY having made a few observations,

The CHAIRMAN said he could only acknowledge with Professor Jevons the advantage of this subject being brought before the Society from time to time. He had nothing to offer with regard to Dr. Todd's system, having only become acquainted with it that day, through the paper that had been read; but very lately a system of analysis had come under his observation which though it might be familiar to some of them, might, he thought, be found useful by others unacquainted with it. It came to his knowledge through a pamphlet of Dr. Bowditch, the American Professor of Physiology, who had been collecting information with regard to the anthropometry of the population of the United States, and he had pointed out how greatly the abstraction of facts relating to the observations of the individuals had been facilitated by the use of cards instead of tables. Instead of having forms in which entries, with regard to certain particulars, were made concerning fifteen or twenty individuals, as in the table before them, all the circumstances relating to one individual were noted upon a card, of course, in a uniform shape. He had been told that this had been adopted in Germany and elsewhere, and therefore some of them might be familiar with it. He had had occasion to analyse a series of anthropometric observations of boys in Christ's Hospital, and he could answer for the difficulty and frequent error in performing the work. Cards were useful in questions of age, weight, &c. The facility of making analysis in that way was immensely advantageous. When there were 100,000 observations to be made, as Dr. Balfour knew, with regard to recruits in the army, and details had to be dealt with one after another, the difficulty and trouble were very great, and there was a liability to confusion and error, causing double the trouble of analysis. The cards were put right and left according as the circumstances required, and each abstract might be effected

by simply shuffling the cards, and counting the number containing the required observation.

Mr. NEISON said that he had adopted the card system in the investigation of cases of mortality and sickness. In one inquiry he had some 400,000 of these cards made out, and by adopting different colours, and marking further the corners of the cards, he found he had been enabled to make his observations in a shorter time and at a minimum of expense. Formerly it required adults to read the cards; but he could now employ, if necessary, schoolboys.

Mr. H. G. BOWEN said, as far as he understood the matter, the cards were used for arriving at certain conclusions, and not for recording conclusions. They did not show any conclusion at a glance. He was accustomed to the use of cards in lieu of indexing. He knew of many instances in which coloured cards, and cards of different shapes, were used. He did not know that the Americans were entitled to the credit of the invention.

Mr. WYNNARD HOOPER said that Dr. Mayr in his book described fully the way in which cards were employed, namely, in the process of collection, and not of concentration. The censuses were collected entirely by means of papers in the ordinary way; then, he believed, the information obtained was abstracted in cards, and subsequently sorted after the method described.

The CHAIRMAN (in continuation) said he did not suppose any one could infer from what he had said, that cards could be used as tables to guide them. They were simply the means of collecting information. The cards were quite as useful as the tables. The table was of no use without the summary. It was difficult to gather anything from the mere table without the summary, in the same way that the separate cards were worthless without the summary, which in questions affecting a large number of observations, might be made more conveniently by arranging the cards, than by abstracting and summarising the contents of the several columns of a table in the ordinary way.

Dr. BALFOUR, F.R.S., said that some time ago the cards were used in a statistical inquiry made by some of the Life Assurance Companies, and it was found to be a great convenience to cut off one corner of the card, so that in sorting them it would be known whether or not they were upside down. The value of the cards was that on them were recorded certain facts, which afterwards had to be tabulated in an analytical form.

Mr. H. MONCREIFF PAUL said he had listened to the paper with great interest, but he should have liked if the author had shown more clearly the uses to which tabular analysis could be applied. But this had, perhaps, been rendered impossible from want of time. For instance, one great use of tabular analysis was to show in analytical form, variations and fluctuations in prices. In one of the tables before him there was given a comparison of the deaths of draymen with those of labourers. In that table for a number of

years results were obtained in a succinct form, which would take a great amount of time and work to write out at length, and would not then clearly show the results it was desirable to indicate. There was another use of tabular analysis—with respect to numerical tables, where it was desirable to arrive at results by comparison of horizontal and vertical additions. Such tables were constantly used in statistics and accounts. If an attempt were made to amplify these by writing out *seriatim* the results, a greater space would be occupied, and the same end would not be attained. There was yet another use, namely, by combinations of letters and figures, such as Dr. Guy had pointed out in his paper was applied by Dr. Todd in the tables exhibited at this meeting. Allusion had been made by previous speakers to the use of cards instead of tables. The objection, however, to the use of cards was that the aggregates of any results could not be given in this way. The card system was therefore incomplete, and could not take the place of tabular analysis.

Professor JEVONS thought it was perfectly apparent that the card method and the tabular method had their distinct uses. The card method had a very great future before it; but the tabular arrangement was quite indispensable, especially in regard to publication, because, as the last speaker remarked, the statement of the contents of one of these tables in a continuous form would occupy a great amount of space.

Mr. W. P. B. SHEPHEARD asked whether Professor Jevons saw any possibility of turning tabular analysis to the investigation of problems in political economy.* He was aware that the curvilinear method had been adopted in Professor Jevons's work on political economy; but that was only to be appreciated by trained mathematicians.

Professor JEVONS observed that in many cases political economy was an abstract theory, and had no relation whatever to statistics.

Dr. GUY, in reply, alluded to circumstances known to the Council, which had prevented him from devoting so much time to his paper as he could have wished; also to the fact that the Society was about to encourage the publication of a work by Professor Mayr, on the general subject of statistics. This work displayed considerable ability, and described some new methods of tabulation. He (Dr. Guy) was afraid that he should find himself anticipated by Dr. Mayr; but when he came to read his book, he found that he and Dr. Mayr were talking of very different things. What he (Dr. Guy) said of this book was also true with regard to what M. Guerry had done. That distinguished Frenchman had been put forward by Mr. Heywood as one who had anticipated Dr. Todd. Mr. Heywood, however, was under a misapprehension. He (Dr. Guy) knew the work M. Guerry had done, and appreciated it very highly; but what Mr. Heywood no doubt meant to say was that M. Guerry

* The title to Dr. Todd's work claims for his method application to *political economy*.

had been the first to employ a certain kind of table of illustration. He had taken a map and tinted the several parts of it according to the prevailing intensity of the thing he was inquiring into. If it was crime, some parts of the map would be very dark, others very light, others of every intermediate tint. The same observation would apply to Dr. Haviland's charts to which allusion had been made. He (Dr. Guy) would make himself better understood if he explained that he recognised three kinds of tabular forms; first, Tables of Record; second, Tables of Illustration; third, Tables of Analysis.

The periodical returns which issued from our Government departments were Tables of Record, and there was such a table on the wall, which showed the strange fluctuations of disease in our convict prisons by contrasting the healthiest years, seasons, and months with the sickliest years, seasons, and months. That was a Table of Record, and something more: it presented certain instructive comparisons.

The second order of tables were Tables of Illustration. One of the tables exhibited was one he (Dr. Guy) had often used at King's College, and showed the coincidences between certain narrow cubic spaces and the fatal diseases that had attacked persons living or sojourning in them. This was a table of illustration by squares and oblongs of one colour. There were two other tables which contrasted by similar figures, tinted with three colours, the crimes committed by three distinct classes of convicts: the weak minded, indicated by the yellow tint, were shown at a glance to be more addicted to arson, for instance, than the healthy or the deformed, indicated by the colours red and green.

The curves again, which the Society saw on the walls, were only other forms of Tables of Illustration, if the term "table" might be fittingly applied to such methods of illustration. He (Dr. Guy) now came to a third order of tables, or Tables of Analysis, of which Dr. Todd's table was one. He hoped that he was doing the Society a service by placing some account of this peculiar form of table on the pages of the Society's *Journal*.

When Dr. Todd, about half a century ago, published an account of his method of procedure, it was in an abstract form, hard to appreciate and follow. He (Dr. Guy) had suspended on the wall some tables which would make that method more intelligible. There was another form of tabular analysis which he might call a Table of Elimination, applicable especially to chemical tests, in which certain tests were applied in succession to a group of bases, or acids, as the case might be. Say that the first test applied gave no reaction with one large section, and a white precipitate with a second group, the one group was thereby separated, or eliminated from the other, and this appeared on the face of the table. On applying a second test, a second subdivision or elimination was effected, and perhaps some members of the leading groups were identified. This process was repeated till every base or acid was distinguished from every other. This was a table of analysis, not of mere record or illustration. The table of diarrhoea in Millbank, as it occurred for a series of years, was of the same order. It brought out the leading causes of diarrhoea by means of tabular

arrangement, and this case was one of special interest, because in this, as in other convict prisons, the inmates throughout the whole of the year are subject to the same diet and regimen, drink the same water, and vary as little as possible in their mode of life. This class of persons then, living as they do this life of monotony and dietetic uniformity, affords one of those opportunities for which we are constantly on the look out, where other things being the same during the period of observation, increased temperature and diarrhoea are shown to be related as cause and effect; the blue tint marking low temperature and cases of diarrhoea below the average, and the red tint the opposite state, the connection of diarrhoea and temperature becomes apparent. He (Dr. Guy) had also suspended other tables in which coincidences were shown by colours, and other tables again which showed the fluctuation from year to year of events brought about as well by physical causes as by the human will. These, too, were examples of tabular analysis, and these tables were interesting as showing that Quetelet was in error when he stated that events brought about by the human will had the steadiness of those events which are produced by purely physical causes. A careful tabular analysis showed, on the contrary, a vast range of fluctuations headed by zymotic diseases, and in which events with which the human will has most to do show a curious freedom from fluctuation. The speaker then referred to another table, which some years ago he had submitted to the Institute of Actuaries; it contrasted, by groups of fifty, cases of patients in the order in which they presented themselves in the out-patient room of King's College Hospital, distinguishing the consumptive from those suffering from all other maladies. These returns he compared with drawings of white and black peas in the same proportions as the cases of disease; the white standing for consumptive cases, the black for all other diseases; and he found a curious approximation to the numbers in the two different orders of facts—the attendance at hospitals with the drawings of the peas. The results arrived at were singularly interesting: the human will, and the movements of the hand directed by what we commonly call *chance*, issuing in very similar figures. The experiment also showed that we could not infer the nature or strength of any forces with which we are dealing by the figures which we obtain. Dr. Guy finished by expressing his belief that by the distinctions which he had drawn between different kinds of tables he had shown that he had not overlooked claims to originality of other statisticians. As to the use of *cards*, he did not wish to undervalue it; but he felt that what had been said in their praise would in no degree affect the value of the method of tabular analysis which he had been describing. A great deal had already been effected by its means, and a great deal more remained to be done; and he was certain that the use of this form of analysis would extend, and by-and-bye, in some practised hands, become a very sure and facile method of arriving at truth.

A vote of thanks was cordially awarded to Dr. Guy for his paper, and the meeting adjourned.

On SOME EFFECTS of a CRISIS on the BANKING INTEREST.

By JOHN B. MARTIN, ESQ., M.A.

[Read before the Statistical Society, 20th May, 1879.]

IT is hardly necessary to make any apology for submitting to the consideration of the Statistical Society matters that concern the banking interest. The profession of the "mean goldsmith," of the days of Evelyn and Pepys has grown with the commercial growth of the nation, until it has become an important estate of the realm. Banks may be compared to the heart of an animal; neither of them create, but both diffuse the circulating medium that keeps the frame in health: or to the engine of a vast factory, which is kept in working order by one or two hands, and silently, without apparent effort, sets in action the machinery that is clattering and crashing throughout the works. But just as any derangement of the heart's action affects the general health, or as a minute obstacle lodged in the wheels of the engine may imperil or throw out of gear the whole of the machinery, so any hitch in the working of our banking system is at once felt throughout the whole of the country, and the causes and effects of any such increase of friction in the working are deserving of careful consideration. That such a condition of affairs had arisen during the autumn of 1878, requires no demonstration; during the first half of the year, though trade was suffering from a long continued depression, money was extremely abundant, and rates very low; during the second half of the year the depression continued, but a defective home harvest and other causes raised the value of money slightly. Yet the year might have closed uneventfully to the banking world, had not the sudden collapse of the City of Glasgow Bank precipitated matters; a state of bad or fictitious trading was revealed that was simply astounding; the successive failures of the Rochdale Bank, the West of England Bank, and one or two others of less importance increased the general distrust, and a kind of panic prevailed. During the three last months of the year hardly any bank could "escape calumny," and it seemed in many cases as if not merely depositors, whose risk was comparatively small, but also the vast body of bank partners whose names form the proprietary of joint stock banks, were competing to pull down the institutions whose fall must inevitably cause their own personal ruin. There existed a prolonged crisis, but it fortunately stopped short of a catastrophe; yet such a stage was reached as to put our banking system on a searching

trial, and to call for the exercise of unusual discretion and prudence; in addition to the perils of navigation in stormy weather, there existed a feeling that the ground was strewn with torpedoes, and that either by accident or design an explosion might take place, against which no precautions could avail, and whose consequences none could foresee.

Under these circumstances it may be not altogether useless to attempt to judge of the effect of this period of strain and trial by a comparison of the balance sheets of some of the principal banks before and after its occurrence; the balance sheets of 30th June, 1878, may be taken as the standard of fair-weather sailing, those of 31st December, 1878, as representing the ship with all made snug for dirty weather. In the pages of the "*Economist*" the statistics of banking are from time to time very carefully analysed, and in a special supplement (19th October, 1878) a very full classification of returns has been published; the tables which accompany these remarks take the figures in much the same way, but selecting and classifying particular groups of banks, and reducing the result to ratios of percentage for the purpose of more effectual comparison.*

It is needless to say that private banks publish no balance sheets, and though it would be interesting to be able to bring them into rank in the present tables, yet it may be assumed that balance sheets are issued for the benefit of the partners, *i.e.*, the shareholders only, not for that of the depositors; otherwise it would be hard to give a logical reason why depositors in private banks, no less than in joint stock banks, should not have the benefit of such enlightenment as a published balance sheet affords as to the status of their banker. On the other hand, if private bankers ought to show balance sheets, why should not they demand a statement of account from their bill brokers and other debtors, why should not also merchants and other large traders show balance sheets? Many of these are actually bankers to foreign correspondents, and are depositaries either in cash or in kind of a vast amount of fiduciary capital.

Failing this we are able to compare (I) the London joint stock banks that are in the Clearing House, and this may be taken to embrace all the London joint stock banks of any importance; (II) the English provincial banks, of which a group of ten of the largest, from various parts of the country, and connected with various classes of commercial, industrial, or agricultural interests,

* The tables which accompany the present paper cannot attempt to compete in fulness with the exhaustive analysis of bank returns by Mr. Dun, laid before the Statistical Society, 21st December, 1875 (*Journal*, March, 1876). Any attempt to repeat these would be superfluous, to enlarge or add to it impossible. But for the purposes of the present paper some repetition of his method to a certain extent is inevitable.

has been taken as representative; (III) Scotch banks, represented by seven of the largest banks; (IV) Irish banks, represented by four principal ones; (V) the Bank of England. Tables I—VI will be found in the Appendix. The list has not been composed entirely without difficulty in the matter of selection; for instance, the National Bank is a London clearing bank, but its main business is in Ireland; it was therefore only with some hesitation that it was included in Table I: again, the National Provincial Bank is almost equal in liabilities to the London and Westminster Bank, and larger than any other, but though it is in the London Clearing House it is mainly a country bank, and the same remark applies to the London and County Bank; but as the former only issues its balance sheet in May it is entered separately, and is not taken into account in the tables of percentages; the County Bank is treated as a London bank. The balance sheets of English country banks are not always taken on the same date, and it has been necessary to reject several on this ground only; the same is more conspicuously the case with the Irish and Scotch banks, and moreover they, in some cases, publish annual sheets only, so much so, that it is only possible to give one complete table in each of these two groups, taking the last balance sheets published in June, 1878.

The Tables I—IV require no explanation; in all cases 000's are omitted for the sake of clearness, and the principal divisions of liabilities and assets are set forth in each case, and a table is appended showing the rates per cent. of the several heads to the gross total. In a separate column the total subscribed capital is stated.

It is evident that the information afforded by these tables only serves to make us wish for more; taking the debtor side of the accounts, we should be glad to know what proportion of the deposits is bearing interest, and what remaining proportion is not; what are the acceptances, and what the (in many cases no doubt unused, or only partially used) credits; on the other side, it would be interesting to learn, how much in the first column is cash, how much at call. Sir Robert Peel asked: what is a pound? We may ask: what is cash? Not money at call, though it is practically, and in most cases justly taken to be so; a bank must necessarily have full confidence that money at call can be converted at once into bank notes, yet it may be doubted whether during the last autumn all bills held from weak borrowers against money lent at call could have been immediately taken up. Even bank notes, or a balance at the Bank of England, cannot be in this sense held to be cash, for theoretically the Bank of England, and even the national credit on which its solvency rests, might fail, and actually it is notorious that in May, 1866, one bank had a balance at the Bank

of England which could not have been met on demand except by infringing the Bank Act of 1844. But that a banker should keep his whole first line of defence in sovereigns in his own vaults is obviously impossible, and, as long as any credit exists at all, bank notes and loans at call, of a prudently managed bank, may fairly be taken for the purposes of a balance sheet as "cash."

In the case of "Government Stocks, &c.," it appears possible that in some instances the "&c." covers securities that hardly come under this category, but the balance sheets are not invariably quite explicit. The next column embraces all other assets, bills, loans, overdrafts, &c. A director of the Bank of England very recently remarked that in his opinion the premises of a bank could not properly be considered as an asset, but in many cases it is stated separately, and I can hardly concur in this opinion.

If we examine Table I we shall at once see that the condition of affairs had so far altered between 30th June and 31st December, 1878, that the London joint stock banks (excluding the National Provincial Bank) had lost 8,331,000*l.* of gross liabilities; their deposits indeed had fallen off 10,665,000*l.*, but their paid-up capital remaining unaltered, they had added 104,000*l.* to reserve and profits, and 2,230,000*l.* to their acceptances and credits. The 10,665,000*l.* is accounted for by a glance at the respective totals; in every case except that of the Union Bank, the deposits and liabilities had fallen; in this exceptional case there is a very small increase in deposits, but a very considerable increase, 1,200,000*l.*, in acceptances. The table of percentages shows the relative changes in the position of this group of banks, and at the same time there is appended, for what it is worth, a statement of the mean ratios of these percentages. The question, where has this 10,665,000*l.* gone? is less easy to answer and can only be guessed at. It was currently reported that the Bank of England opened a great many accounts during the autumn, and we see by Table V that the "other deposits" at the Bank of England increased nearly 6 millions. But it is well known that in a crisis the bankers' balances at the Bank of England are, and they undoubtedly were on this occasion, abnormally high, so that we cannot say with certainty that the balances of the general customers rose to this amount. Again, it is more than probable that the balances of country banks in the hands of their London agents shrink at the first symptoms of a crisis. Others said that the private bankers were filling their signature books very fast, but this too is a statement which we have no figures to support; or again the public may have withdrawn their deposits and invested in consols, but in this case who sold the consols? was it the bankers themselves, or poorer stockholders who were forced by hard times to realise? There

was even a suggestion that people were keeping their money in their own houses, and it was alleged that the increase of burglaries, especially in the west of England, during the winter was owing to the prospects of increased plunder from this cause. But this too is a conjecture, and the statistics of burglaries have not yet been attempted by this Society. It is possible that shrinkages in values of stocks and produce may have had a good deal to do with the matter, and higher rates usually point to lower balances at the bankers; both of these factors were operative during the autumn of 1878. The credit side of this table offers little matter for comment; and there is uniform shrinkage under all heads, and the ratios in the table of percentages scarcely vary, save that there is an increase of a little under 2 per cent. in the item of cash, compensated by a corresponding diminution in the amount of other securities.

The ten country banks which are scheduled in Table II exhibit, as compared with the twelve London banks of Table I, a far smaller volume of gross liabilities, a total namely of 38,000,000*l.* against 128,000,000*l.* It would have been well if a comparison could have been made of equal totals; but as the totals of the London clearing banks are nearly one-half of the total of the published returns of all the English banks put together, *i.e.*, 159,000,000*l.* out of 333,000,000*l.*, the attempt would have made the table unwieldy, and the selection of a small number of the largest in point of liabilities may, it is hoped, be taken as fairly representative. The small variation of the totals in June and December is striking, for whereas the London banks had diminished their liabilities during this period by some 7 per cent., and their deposits had fallen off no less than 11 per cent., there is not a variation of more than 2 to 3 per cent. in any total of the country banks.

The result of the peculiar conditions of Scotch banking is that the seven principal banks which are brought under Table III have average liabilities slightly exceeding those of the London clearing banks, while the liabilities of the four principal Irish banks (excluding the National Bank) of which the accounts are obtainable, are very much less on an average, though they slightly exceed those of the English country banks; but in the case of the Scotch and Irish balance sheets, they are taken at various dates (in many instances only once a-year); so that no relative comparison has been practicable.

The returns of the Bank of England (banking department) are taken under the dates of 25th June and 24th (for 25th) December respectively, rather than on 2nd July and 1st January, because the difference caused by the turn of the half-year is at all times notorious, and was never so conspicuous as on 1st January last. By

common consent this last date appeared to have been fixed as the end of troubles: money poured into the market in a flood, and rates fell to an extent altogether without precedent. It will be seen that on 25th December the banking liabilities of the Bank had increased nearly 4 millions. The proportion of capital to liabilities is therefore reduced, but reserve and acceptances are unchanged. The public deposits, owing to the fiscal arrangements of the Exchequer, show a very marked reduction of over 2 millions, or 6 per cent., while the "other deposits" are increased by nearly 6 millions, or an increase of ratio to total liabilities of 6·2 per cent.; but as stated above, we cannot tell how much of this increase is due to the augmentation of the balances of general customers and how much to that of the bankers' balances. But public and other deposits together show a variation of only + 2½ per cent. The credit side of the account shows that in December the advances of the bank had increased in the relative proportion of 11 per cent. at the expense of the cash and Government securities. In Table VI the percentages of the previous tables are brought together for more easy comparison, and the figures speak for themselves. It appears that London banks trade on the smallest percentage of capital and accept more largely, and that the amount of acceptances had increased during the troubled time, both absolutely and relatively. On the other side they have the largest percentage of cash and the smallest percentage of advances and discounts. The Bank of England stands out as a conspicuous exception under every head on both sides of the account.

To these tables is appended a memorandum of the percentage of total capital to gross liabilities under all the groups, which shows that the Scotch banks of Table III are trading on subscribed capital all paid up of 9·2 per cent. Next are the Irish banks, 10·7 per cent.; then the London banks, 23·1 per cent.; the Bank of England, 30·5 per cent.; and lastly, the English country banks, 40·7 per cent. If it were the province of this Society to discuss questions of casuistry or ethics, it might be asked how far the shareholders whose ruin has lately excited so much sympathy, were justified in making themselves partners in a business of whose administration they were totally ignorant, and in incurring liabilities which in case of failure they had no means whatever to meet.

It remains to attempt an investigation of the profits of the two half years; but unfortunately it is only in the case of the London banks that the figures are given in such a shape as to make classification and comparison possible. The country, Scotch, and Irish banks give as a rule very meagre information on this point. Table VII shows the profit and loss accounts for June and December of the London joint stock banks under the heads of (1) expenses

of management, (2) rebate, (3) amount carried to reserve, (4) amount available for dividends and amount carried forward, and a table of percentages to total in the two half years respectively is appended. It must first be noted that the total is given "after making allowance for bad and doubtful debts;" the real gross total is an *x* quantity left to the imagination of the shareholders.

TABLE VII.—*Profit and Loss, July, 1878.*

<i>Dr.</i>	Expenses, &c.	Rebate.	Reserve.	Dividends and Carried Forward.	Total.
Alliance	15,491	5,268	10,000	26,672	57,431
Central	10,817	5,958	5,000	3,833	25,608
City	25,818	5,812	15,000	34,761	81,391
Consolidated	16,462	5,352	2,750	46,196	70,760
County	144,058	115,040	25,000	144,224	428,322
Imperial	13,166	2,639	5,000	23,018	43,823
Joint	49,857	13,450	8,410	101,376	173,093
London and Westminster...	81,562	—	60,091	140,000	281,653
Metropolitan	3,564	643	—	5,107	9,314
National	76,734	—	10,000	96,582	183,316
South Western	21,668	1,741	—	11,090	34,499
Union	42,750*	15,226	10,000	105,872	173,848
	501,947	171,129	141,251	738,731	1,563,058
Ratio January—June	32·1	10·9	9·4	47·6	= 100
„ July—December	30·8	16·2	7·9	45·1	= 100
„ Mean of year	31·45	13·55	8·65	46·35	= 100

* Estimated from mean ratio of other banks as above.

Profit and Loss, January, 1879.

<i>Dr.</i>	Expenses, &c.	Rebate.	Reserve.	Dividends and Carried Forward.	Total.
Alliance	15,466	7,424	—	34,194	57,084
Central	10,483	10,476	2,000	10,044	33,003
City	28,390	7,427	—	33,712	69,529
Consolidated	16,341	5,062	2,675	45,241	69,319
County	161,806	189,693	25,000	152,583	529,082
Imperial	12,186	3,867	5,000	24,031	45,084
Joint	50,445	19,730	8,536	104,377	183,088
London and Westminster...	80,134	—	62,878	140,000	283,012
Metropolitan	3,296	598	—	2,841	6,735
National	74,109	—	5,000	94,904	174,013
South Western	17,291	9,745	4,743	7,040	38,819
Union	42,750*	16,863	15,000	105,682	180,295
	512,697	270,885	130,832	754,649	1,669,063
Ratio	30·8	16·2	7·9	45·1	= 100

* Estimated.

TABLE VIII.

	Bank Rate.	Call Rate.
	£ s. d.	£ s. d.
31st December—30th June	1 6 5 per cent.	— 15 10 per cent.
30th June—31st December	2 9 1 „	1 16 10 „
For year.....	3 15 6 per cent.	2 12 8 per cent.

Table VIII shows the variations in the average bank rate and call rate for the two half years; and if a mere rule of three sum were applicable, it would appear that if 128,000,000*l.* earn 1,563,000*l.* when the bank rate is at 1*l.* 6*s.* 5*d.*, 120,000,000*l.* ought to earn 2,722,000*l.* when the bank rate is at 2*l.* 9*s.* 1*d.* The actual result is far different, the (so-called) gross profit being 1,669,000*l.* for the second half of the year. As a rule, banks are working closer to the bank rate when money is dear, and the gross profit should therefore be still higher than 2,722,000*l.*; but though it is improbable that over a million sterling was written off for bad and doubtful debts, depreciation of stocks, &c., the discrepancy of the fact from the estimate is not easily explicable.

It appears then that in the two half years the expenses were much the same; the rebate was naturally higher for the second half of the year; and the amount actually divided was equalised by a reduction in the amount carried to reserve. The gross profits for the whole year on the paid-up capital are 29 per cent., while the amount actually divided among the shareholders and carried forward is 13·6 + 2·5 respectively, = 16·1 per cent. on a paid-up capital of 10,962,000*l.*, and 2·6 per cent. on a mean total of liabilities taken at 124,000,000*l.* In the case of English country banks the cost of management, &c., is not always given, and it is not practicable to compare the expense of carrying them on with that of London banks. The ten banks comprised in Table II divided or carried forward during 1878 786,778*l.* = 19·1 per cent. on a paid-up capital of 4,100,000*l.*, or 2 per cent. on total liabilities of 38,000,000*l.* From this it appears that the shareholders of country banks gain a higher return than those of London banks, but that the return on liabilities is smaller in the case of country banks in nearly a similar degree. It will be borne in mind that the ratio of capital to liabilities is in London banks 8·7 per cent. against 10·75 in country banks. The Scotch and Irish banks yield 14·3 and 15·3 per cent. respectively on their capital, and their net profits on liabilities is also smaller. The four groups of banks taken together show an

average net profit of 16 per cent. on their capital and 2 per cent. on their total liabilities, and as the amount actually available to the proprietors is, in the case of London banks, $46\cdot35 + 8\cdot65 = 55$ per cent. of the so-called gross profits (while the expenses of country banks, as far as can be gathered from imperfect data, are rather higher), we may take the net profit, before deducting cost of management, &c., at 4 per cent. on the liabilities, "after allowing for "bad and doubtful debts." But as to this *x* quantity the balance sheets are altogether reticent, and owing to the difficulty of ascertaining the proportion of interest-bearing to non-interest-bearing balances, it is very difficult to estimate it with any degree of confidence: but as the result of a calculation based on data more or less conjectural, it would appear that either the losses are not more than would pay about 2 per cent. into the pockets of the proprietors, or else that the gross profits are much larger in proportion to liabilities than is usually supposed.

TABLE VIIIA.

	Percentage of Gross Profits on Paid Capital.	Percentage of Net Profits on Paid Capital.	Percentage of Net Profits on Liabilities.
London clearing banks	29·0	16·1	2·6
English provincial „	—	19·1	2·0
Scotch banks	—	14·2	1·3
Irish „	—	15·3	1·6

But the effect of any sudden disturbance in banking interests must be looked for, not only in the profit and loss account, but in the market quotation of values, and if we attempt to estimate the degree of intensity of the crisis of 1878 by this standard, we shall find that the disturbance was here much more marked. In Table IX, 1—4, the prices and values of the shares of each bank in the four groups of (1) London clearing banks, (2) English country banks, (3) Scotch banks, (4) Irish banks, at the end of June and the end of December, 1878, are given, the par value of the shares being in each case raised to its equivalent in 100*l.* stock; at the same time the ratio per cent. of the price in December to that of June, the latter being taken at 100, is given in a separate column. In Table X the results of these four tables are brought together and summarised.

TABLE IX-1.—*London Joint Stock Clearing Banks.*

	Paid up Capital. [000's omitted.]	Price, 29th June, 1878.	Value, 29th June, [000's omitted.]	Price, 28th Dec., 1878.	Value, 28th Dec., [000's omitted.]	Comparative Values.	
						June 29.	Dec. 28.
Alliance, Limited.....	800,	125	1,000,	98 $\frac{3}{4}$	790,	100	79'00
Central „	100,	175	175,	170	170,	100	97'14
City	600,	177 $\frac{1}{2}$	1,065,	125	750,	100	70'42
Consolidated, Limited	800,	193	1,544,	162 $\frac{1}{2}$	1,300,	100	84'19
County	1,500,	333 $\frac{3}{4}$	5,006,	253 $\frac{3}{4}$	3,806,	100	76'03
Imperial, Limited	675,	120	810,	108 $\frac{1}{3}$	731,	100	90'24
Joint Stock	1,200,	326 $\frac{2}{3}$	3,920,	268 $\frac{1}{3}$	3,220,	100	82'14
London and West- minster }	2,000,	326 $\frac{1}{4}$	6,525,	247 $\frac{1}{2}$	4,950,	100	76'86
Metropolitan, Limited	192,	43	82,	39 $\frac{3}{8}$	75,	100	90'24
National	1,500,	251 $\frac{2}{3}$	3,765,	223	3,345,	100	88'84
National Provincial {	420,	442 $\frac{3}{4}$	1,860,	328 $\frac{1}{2}$	1,379,	} 100	74'75
	1,267,	431 $\frac{1}{4}$	5,463,	325	4,117,		
South Western, Lim.	200,	140	280,	110	220,	100	78'57
Union	1,395,	282 $\frac{1}{3}$	3,936,	223 $\frac{1}{3}$	3,115,	100	79'14
	—	—	35,431,	—	27,968,	100	78'93

TABLE IX-2.—*English Provincial Banks.*

	Paid-up Capital. [000's omitted.]	Price, 29th June, 1878.	Value, 29th June, [000's omitted.]	Price, 28th Dec., 1878.	Value, 28th Dec., [000's omitted.]	Comparative Values.	
						June 29.	Dec. 28.
Birmingham Joint Stock, Limited }	297,	342 $\frac{1}{2}$	1,017,	325	965,	100	97'08
Bradford Old Bank, L.	425,	307 $\frac{1}{2}$	1,306,	312 $\frac{1}{2}$	1,328,	100	101'62
Cumberland Union, L.	225,	334	751,	360	810,	100	107'85
Liverpool Union	600,	177 $\frac{1}{2}$	1,065,	145	870,	100	81'97
Lloyd's Banking Company, Limited }	440,	337 $\frac{1}{2}$	1,485,	284 $\frac{3}{8}$	1,251,	100	84'24
Manchester and County, Limited }	660,	275 $\frac{1}{3}$	1,816,	243 $\frac{1}{3}$	1,605,	100	88'38
North and South Wales	500,	335	1,675,	300	1,500,	100	89'55
Parr's Banking Company, Limited }	393,*	310	1,218,	305	1,198,	100	98'38
Wilts and Dorset Bank	300,	430	1,290,	415	1,245,	100	96'51
Yorkshire Banking Co.	250,	410	1,025,	304	760,	100	74'14
	—	—	12,648,	—	11,532,	100	91'17

* 3,515 shares at 30*l.*, issued December, 1878.

TABLE IX-3.—*Scotch Banks.*

	Paid-up Capital. [000's omitted.]	Price, 29th June, 1878.	Value. [000's omitted.]	Price 28th Dec., 1878.	Value. [000's omitted.]	Comparative Values.	
						June 29.	Dec. 28.
Bank of Scotland.....	1,250,	325	4,062,	276	3,450,	100	84'92
British Linen Com- pany Bank	1,000,	311	3,110,	245	2,450,	100	78'77
Clydesdale Banking Company	1,000,	275½	2,755,	166	1,660,	100	60'25
Commercial Bank of Scotland	1,000,	325	3,250,	240	2,400,	100	73'84
National Bank of Scotland	1,000,	319	3,190,	262	2,620,	100	82'13
Royal Bank of Scot- land	2,000,	231	4,620,	193	3,860,	100	83'54
Union Bank of Scotland	1,000.	269	2,690,	175	1,750,	100	65'05
	—	—	23,677,	—	18,190,	100	76'82

TABLE IX-4.—*Irish Banks.*

	Paid-up Capital. [000's omitted.]	Price, 29th June, 1878.	Value. [000's omitted.]	Price, 28th Dec., 1878.	Value. [000's omitted.]	Comparative Values.	
						June 29.	Dec. 28.
Hibernian Joint Stock Bank	500,	254½	1,272,	196	980,	100	77'01
Munster Banking Company, Limited	350,	269½	943,	232	812,	100	86'08
Royal Bank of Ireland	300,	335	1,005,	302½	907,	100	90'29
Ulster Banking Com- pany	300,	480	1,440,	405	1,215,	100	84'37
	—	—	4,660,	—	3,914,	100	83'99

TABLE X.—*Showing the Depreciation in the Cash Value of Bank Shares, from 29th June to 28th December, 1878.*

	Value, 29th June, 1878. [000's omitted.]	Value, 28th Dec., 1878. [000's omitted.]	Loss. [000's omitted.]	Value, 29th June.	Value, 28th Dec.
London clearing banks	35,431,	27,968,	7,463,	100	78'93
English provincial „	12,648,	11,532,	1,116,	100	91'17
Scotch banks	23,677,	18,190,	5,487,	100	76'82
Irish „	4,660,	3,914,	746,	100	83'99
	76,416,	61,604,	14,812,	100	82'73

From these tables it appears that there has been in all cases, except in those of two English provincial banks, a serious depreciation in value, viz. :—

	Per Cent.	£
London clearing banks	21'07	= 7,463,000
English provincial „	8'83	= 1,116,000
Scotch banks	23'18	= 5,487,000
Irish „	16'01	= 746,000

and if we apply these ratios to the whole amount of capital invested in banks in the United Kingdom, we shall find that the loss stands thus :—

	Paid Capital.	Depreciation.
	£	£
English banks.....	48,313,000	22,244,000
Scotch „ (exclusive of City of Glasgow Bank)	12,538,000	8,358,000
Irish banks	6,809,000	3,503,000
	67,660,000	34,105,000

in other words, the crisis of 1878 cost the proprietors of bank shares rather more than half of their paid-up capital.

There can be no doubt that the almost incredible story of mismanagement revealed by the failure of the City of Glasgow Bank was to some extent the cause of this great depreciation; the practice of banking in Scotland had always been held up as a pattern, and if such things were possible under it, none could be safe, and the values of Scotch bank shares accordingly show the heaviest fall; there was also the fear lest a great part of the vast losses of that bank might fall on others, and cause, if not embarrassment or failure, at least reduced dividends, and as the London banks may have been, and were assumed to hold a large quantity of the acceptances of the City of Glasgow Bank or of firms which collapsed with it, their shares fell more heavily than those of English country banks. Further, there must have been, in some instances, a choice to needy shareholders between borrowing on and selling their shares, and the unwillingness of banks to make such advances must have thrown forced sales on a market already unfavourable. But there was yet another very powerful influence at work, which probably had more weight than any other; the utter ruin which had fallen on the proprietors of the City of Glasgow Bank terrified all who held shares in unlimited companies, whether on their own account or as executors or trustees, and all were alike anxious to obtain release from so overwhelming a responsibility. A mere oversight in accepting as security four shares of the City of Glasgow Bank

dragged down the Caledonian Bank with the former, and there appeared to be no safety under any circumstances for the holder of shares in an unlimited company.

That this was the case is clearly shown by separating the limited from the unlimited banks, as is done in the following tables, from which we shall see at once that not only was the fall greater in every group of unlimited banks, but that it is the strongest and most powerful banks, and conspicuously so in the case of the London banks, that have undergone the greatest depreciation. The same rule applies to the English country banks, though the number of those compared is rather small for drawing a general conclusion, and local influences may, in the case of country banks, bring disturbing forces into the calculation. The heaviest fall is in Scotch banks, and this we should naturally expect.

TABLE XI-1.—*London Joint Stock Clearing Banks.*

Limited.	Variation per Cent.	Unlimited.	Variation per Cent.
South Western	— 21'43	City	— 29'58
Alliance	— 21'0	National Provincial	— 25'25
Consolidated	— 15'81	County	— 23'97
Imperial	— 9'76	London and Westminster....	— 23'14
Metropolitan	— 9'76	Union.....	— 20'86
Central	— 2'86	Joint Stock	— 17'86
		National	— 11'16
Mean	— 13'44	Mean	— 21'69

TABLE XI-2.—*English Provincial Banks.*

Limited.	Variation per Cent.	Unlimited.	Variation per Cent.
Cumberland Union*	+ 7'85	Yorkshire Banking Com- pany*	— 25'86
Bradford Old Bank*.....	+ 1'62		
Lloyd's Banking Company	— 15'76	Liverpool Union	— 18'03
Manchester and County ...	— 11'62	North and South Wales*....	— 10'45
Birmingham Joint Stock	— 2'92	Wilts and Dorset*	— 3'49
Parr's Banking Company	— 1'62		
Mean	— 3'64	Mean	— 14'46

* Banks of issue.

TABLE XI-3.—*Scotch Banks.*

Unlimited.		Variation per Cent.
Clydesdale Banking Company	—	39'75
Union of Scotland	—	34'95
Commercial of Scotland.....	—	26'16
British Linen Company Bank, Chartered *	—	21'23
National of Scotland	—	17'87
Royal „ Chartered *.....	—	16'46
Bank „ „ *.....	—	15'08
Mean	—	24'50

TABLE XI-4.—*Irish Banks.*

Limited.	Variation per Cent.	Unlimited.	Variation per Cent.
Munster Banking Company	— 13'92	Hibernian Bank	— 22'99
		Ulster „	— 15'63
		Royal „	— 9'76
		Mean	— 16'11

TABLE XI-5.—*Summary.*

	Variation per Cent.	
	Limited.	Unlimited.
London clearing banks	— 13'44	— 21'69
English provincial „	— 3'64	— 14'46
Scotch banks	—	— 24'50
Irish „	— 13'92	— 16'11
Mean	— 10'33	— 19'19

II.

It will be well before going any further, to compare the effects of the panic of 1866 with that of 1878, to endeavour to ascertain whether the facts of the two periods show any points of agreement, difference, or concomitant variations on which an inference can be based. For this purpose Tables XII (1—2) have been drawn up in order to compare the value of bank shares in groups of London and country banks, and the amount of their liabilities to the public before and after the panic of 1866; the irregularity of the returns of Scotch and Irish banks, as before, preclude comparison.

* The exact liability of the chartered Scotch banks is undetermined; they “believe themselves to be limited.”

TABLE XII-1.

	31st December, 1865.			30th June, 1866.			Variations per Cent., Price of, 31st Dec., 1865. = 100.	Liabilities to Public. [000's omitted.]		Variations per Cent. Deposits 31st Dec. 1865. = 100.
	Paid-up Capital. [000's omitted.]	Price.	Value. [000's omitted.]	Paid-up Capital. [000's omitted.]	Price.	Value. [000's omitted.]		Dec. 31, 1865.	June 30, 1866.	
Alliance, Limited	985,	116	1,142,	989,	88	870,	- 24'14	2,504,	1,636,	- 34'67
(Central) East } London, Limited }	100,	100	100,	100,	60	60,	- 40'0	447,	384,	- 14'10
Consolidated, Lim.	600,	262½	1,575,	600,	93¾	562,	- 64'32	3,818,	3,587,	- 6'06
Imperial, „	448,	147½	660,	448,	125	560,	- 15'26	1,543,	1,234,	- 20'03
Metropolitan, „	337,	90	303,	337,	72½	244,	- 19'48	860,	469,	- 45'47
South Western, „	200,	100	200,	200,	80	160,	- 20'0	577,	461,	- 20'11
—	—	—	—	—	—	—	- 30'60	9,749,	7,771,	—
City	500,	224	1,120,	500,	160	800,	- 28'58	4,859,	5,408,	+ 11'29
County	750,	400	3,000,	750,	330	2,475,	- 17'50	12,851,	12,750,	- 0'79
Joint Stock	1,080,	340	3,672,	1,080,	293½	3,167,	- 13'74	18,215,	18,764,	+ 3'01
London and West- minster	1,000,	483¾	4,837,	1,000,	460	4,600,	- 4'91	20,779,	22,298,	+ 7'31
National	1,500,	263½	3,949,	1,500,	221¾	3,324,	- 15'83	8,250,	7,514,	- 10'93
National Provincial {	420,	362	1,520,	420,	352½	1,480,	- 2'63	} —	—	—
Union	660,	375	2,475,	660,	341¾	2,254,	- 8'90			
—	1,200,	363½	4,362,	1,200,	281¼	3,375,	- 22'60	17,794,	19,424,	+ 9'12
—	—	—	28,915,	—	—	23,931,	- 14'31	94,497,	93,929,	—
—	—	—	—	—	—	- 18'00	—	—	- 0'61	—

TABLE XII-2.

	31st December, 1865.			30th June, 1866.			Variations, Price, 31st Dec., 1865. = 100.	Liabilities to Public.		
	Paid-up Capital. [000's omitted.]	Price.	Value. [000's omitted.]	Paid-up Capital. [000's omitted.]	Price.	Value. [000's omitted.]		Dec. 31, 1865. [000's omitted.]	June 30, 1866. [000's omitted.]	Variations, Deposits, 31st Dec., = 100.
Birmingham Joint Stock Bank, L. }	203,	380	771,	203,	365	740,	- 4'03	1,107,	1,119,	+ 1'07
Bradford Old Bank, L }	187,	144	269,	384,	134	514,	- 6'95	862,	763,	- 11'49
Cumberland Union, Limited }	225,	296	666,	225,	292	657,	- 1'33	1,029,	1,088,	+ 5'73
Lloyd's Banking Company, Lim. }	143,	290	362,	176,	285	501,	- 1'73	1,166,	1,508,	+ 29'33
Manchester and County, Limited }	491,	133	653,	598,	115	687,	- 13'54	1,988,	2,272,	+ 14'28
Parr's Banking Company, Lim. }	100,	155	155,	100,	150	150,	- 3'23	906,	*903,	- 0'40
Liverpool Union	450,	170	765,	450,	155	697,	- 8'83	1,900,	1,550,	- 18'43
North and South Wales Bank }	300,	240	720,	300,	240	720,	Nil {	not then pub lished		} —
Wilts and Dorset	200,	320	640,	200,	320	640,	Nil	1,674,	*1,870,	+ 11'70
Yorkshire Banking Company	210,	266	558,	210,	266	558,	Nil	1,374,	1,377,	+ 0'21
—	—	—	—	—	—	—	—	12,006,	12,450,	—

* 31st December, 1866, accounts annual.

It must be borne in mind that the panics of 1866 and 1878 were preceded by a condition of things in some respects dissimilar. The average bank rate for the period preceding 1866 was much higher than for the period preceding 1878. If we take the five antecedent years in each case we have the following averages :—

		<i>Bank Rate.</i>							
		£	s.	d.			£	s.	d.
1862	2	10	6		1874	3	13	2	
'63	4	8	4		'75	3	5	6	
'64	7	7	7		'76	2	12	6 $\frac{3}{4}$	
'65	4	15	1 $\frac{1}{4}$		'77	2	18	— $\frac{1}{2}$	
'66	6	19	9		'78	3	15	2 $\frac{1}{2}$	
Average = 100	5	2	3		Average = 63'48	3	4	10 $\frac{3}{4}$	

But at the same time, 1866 terminated a period of inflation in the way of credit and finance companies, amalgamation and conversion of banks and companies, and witnessed, but unfortunately did not terminate, the system of lavish lending to foreign Governments. 1878 came after, but did not bring to a close a long period of contraction and depression, of losses in trade and agriculture, of vanishing into air of capital lent to foreign nations, and of a general shrinkage in values and wages. On the other hand, the two panics occurred at more or less the same relative periods of the half-year, when the ordinary requirements of the country are in many points the same. It must also be borne in mind that we are only able to compare the cases of those who, in some fashion, weathered the storm. No London Joint stock bank failed in 1878, but in 1866 the Agra and Masterman's Bank, the Bank of London, the European Bank, and the English Joint Stock Bank went down, and so for a brief period did the Consolidated Bank. Yet no disaster compared to the failure of the City of Glasgow Bank occurred in 1866 to raise a panic among shareholders, and it is not therefore surprising that, while there was a general fall in the value of London bank shares, there is not the conspicuous difference between the depreciation of limited and unlimited bank shares that we notice in 1878. Each case appears to have been judged on its merits, or more correctly speaking, on its assumed demerits. It is also to be noticed that whereas in 1878 there was a general fall in the liabilities to the public of these same banks to the amount of not less than 10,665,000*l.*, in 1866 it was principally the smaller limited banks that lost their deposits, while the stronger unlimited banks increased their deposits, so as to absorb almost the whole of the deficiency, and so the deposits of all the London banks taken together only fell off 568,000*l.* or 0'61 per cent.

It is less easy to compare the group of country banks, for whereas in the case of the London banks there was only in one case, the Alliance Bank, a merely nominal increase of paid-up

capital, there was in the case of the country banks in several instances a considerable increase under this head, whereby the estimation of the bank may have been affected; it has also been pointed out by those who have kindly supplied information as to some of these country banks, that their balances are affected by periodical demands that do not always coincide in point of time in agricultural, manufacturing, or exporting centres. And the difficulty is as before increased by the irregularity in point of date of the returns, yet even after making allowance for the cases where the balance sheet was not published until the end of the year, when the storm was fairly over, we see that the deposits increased in amount. Comparing the deposits at the two periods the account stands thus :—

	1878.	1866.
	£	£
Liabilities to public of selected group of English country banks (first period)	31,889,000	12,006,000
Deduct North and South Wales Bank, balance not published in 1866	4,943,000	—
	26,946,000	—
Liabilities at second period	27,134,000	12,450,000
Increase	188,000 20·69	344,000 =3·69

Perhaps the most remarkable feature in this table is the great increase in the business of the country banks during the twelve years; it is relatively much larger than in the case of the London banks; the deposits of the latter at December 1878, are to those of June 1866, as 111·27 to 100; those of the country banks are as 250·99 to 100. The fall in value of the shares in 1866 was less than in 1878, and in both cases less serious than that of the London banks.

A comparison of the balance-sheets of the Bank of England before and after the panics of 1866 and 1878 (Tables V and VA) shows that very much the same effect was produced on each occasion; in the former the total rose between December 1865, and June 1866, from 39,989,000*l.* to 47,450,000*l.*, or nearly 7 millions and a-half, in 1878 from 47,777,000*l.* to 51,484,000*l.*, or 3,700,000*l.* This rise is more than accounted for by a rise in “other deposits” of more than 7 millions and a-half in 1866, and of nearly 6 millions in 1878, or of 10·98 per cent. and 8·2 per cent. respectively to total liabilities. On the credit side the “other securities” show an increase in 1866 of over 8 millions, in 1878 of over 7 millions, or of 8·71 per cent. and 10·9 per cent. to total assets. This increased accommodation afforded in times of pressure by the Bank of England is of course obtained by trenching on the

reserve of notes in the till; but it is also facilitated by the rise in the balances, especially those of the bankers, at the Bank of England; legitimate borrowers will not be denied, and they thus merely borrow through the Bank of England at second hand from their own bankers. In this way the wide-spread and eager desire to obtain the *command* of bank notes (and a modern panic is nothing else) is satisfied; it must not be forgotten by those who view with alarm our vast inverted pyramid of credit balanced on an apex of gold, that since the Bank Act of 1844 there has never been a gold panic; in such a case the suspension of the Act should intensify the panic, as a matter of fact in 1866 this step at once allayed it.

The comparative value of bank stock before and after the panics of 1866 and 1878 was as follows:—

30th Dec., 1865	....	246	—	29th June, 1878	....	258	—
30th June, '66	....	240	— 2'44 pr. cent.	31st Dec., '78	....	250½	— 3'10 pr. cent.

It may perhaps be thought that the present paper is incomplete if it does not include some inquiry into the conditions of colonial, and especially of Indian and China banks; but in view of the fact that these have dealings in many cases of a mercantile rather than of what is held to be a strictly banking character, and that they could hardly be discussed without bringing forward the question of the depreciation of silver and the irrepressible Rupee, which has so lately occupied the attention of the Society, it will perhaps be pardonable to have left this investigation altogether on one side.

III.

In the foregoing tables, and the remarks which have already been made upon them, an attempt has been made, though it may be feared but imperfectly, to lay before the Society some of the more salient features of two different aspects that have recently been presented by the banks of the United Kingdom; but as we were reminded in the inaugural address of our President in 1877, the object of our Association “does not consist in the mere collection of “aggregate facts,” but it is “one of the first duties of this Society “to select those subjects for its investigation and discussion, which “are of present interest to the public, or which in the near future “are likely to be dealt with; to apply to them the most rigid “examination of the surrounding facts; to test theories by verification from every possible quarter; to lay bare with unflinching “severity any fallacies, which are too certain to be attendant on “such discussion, and to supply methods of comparison by example “or difference, which may tend to elucidate the bearing of proposed “measures.”

The subject matter of the present paper may fairly claim to satisfy the above definition, and any inferences which may be

deducible therefrom should point to some practical end, rather than to a mere discussion of theories, of which, in questions of currency, finance, and banking, there is no lack. Yet, to the question: What do these figures prove? what is the moral of them? it is not easy to give an answer. The present investigation was not begun with the object of supporting any preconceived theory, nor has public opinion pointed definitely in any one direction in the way of proposed banking legislation. The culpable mismanagement of the City of Glasgow Bank, and the vast amount of misery caused thereby to many innocent persons, caused a general exclamation that something must be done; what that something should be no one was prepared to say, and save a very futile proposal to restrict banking business, nothing has as yet been accomplished.*

The weak points in the present system of banking, the vulnerable joints in the harness, seem referable to two classes: (1) those which are matters of management and discretion, and (2) those which may be made matters for legislation. Of the first class the principal are the subjects of allowance of interest on deposits, acceptances by banks, the proportion of reserves to liabilities, and what should be the nature of such reserves; of the second class are the questions of liability of shareholders, the issue of bank notes, the form of balance sheets, whether such balance sheets should be compulsory or not, and audit.

If we reflect on the historical, one might almost say the archaeological origin of banking business, some of these points will prove to hang more together than they appear to do at the present stage of its development. A little over two hundred years ago the "goldsmith" had hardly begun to develop into the banker,† and the ever hungry exchequer was the natural place of deposit for spare cash, at interest "on tallies." But the temporary confiscation by Charles I of the bullion in the Tower (see "Pepy's Diary," 17th August, 1666), or later on, the closing of the exchequer by Charles II, 1st January, 1672, probably convinced many people that their money was as safe in the hands of a private as of a royal banker, and in fact it was an argument against a State bank that the temptation to lay hands on its resources might be too strong for the virtue of the crown, an argument which was supported as late as 1833, by Lord Althorp. But it was held remarkable that in Holland, whose political condition was such that this objection to a

* During the composition of this paper the following Bills have been laid before parliament, but not yet discussed:—Joint Stock Banks Audit Act, 1879, Dr. Cameron; Joint Stock Banks Audit Act (Scotland), Mr. McLaren; Banking Amendment Act, 1879, Mr. James Barclay. These sheets were in the press when the Chancellor of the Exchequer moved (22nd April) to bring in his Bill.

† It must be borne in mind that it was only in Henry VIII's reign, 1546, that money-lending at interest was made legal.

State bank did not hold good, no interest at all was allowed to private depositors. In those days the bankers not only took money at interest, but gave a receipt for it in the shape of a promissory note, payable on demand; if part of the deposit only were required, the face value of the note was reduced, and it went into circulation again.

Some examples of these deposit notes have been kindly supplied by Mr. F. G. Hilton Price, and a specimen runs thus:—

No. 72.	London, Dec. 5, 1734.
I promise to pay to Mr. <i>Benj. Tassell</i> or order on demand	
<i>one hundred pounds</i> _____.	
£100	Mar. 13.
50	For S ^r Fran ^s Child & Compy.
50	<i>Ban^y Back [well].</i>

And it is endorsed with the payment of 20*l.* or 30*l.* on different dates. But it is not certain that in those days a goldsmith's issue was equal to his deposits, since cheques were used at the same period.

It was a very simple improvement to turn such a promissory note into a number of smaller ones, and so to create bank notes; it is therefore evident that the practice of issuing bank notes and of allowing interest on deposits is coeval with banking itself; it was in a subsequent stage of development that bank notes were used (especially in Scotland) as a means of making advances, increasing the business of a bank. But it is also evident that as soon as the voucher, whether it be called deposit note or bank note, passes into third hands the nature of the operation is changed, and every holder becomes practically a depositor in the issuing bank. It may be said that no one is forced to take a non-legal-tender note; but in practice it will probably be found that those who can least afford the loss will be those who are least in a position to decline taking a local note, and there is therefore much to be said in favour of ensuring its convertibility, either by causing to be held against it either bullion or security, or by making it a first charge on assets. The question of local issues has been fully discussed before this Society by Mr. Dun, and little remains to be said on it. The crisis of 1878 did not bring the subject prominently before the public, but the combined action of some of the Scotch banks in the matter of the notes of the City of Glasgow Bank was evidently taken as a measure of self-defence by restoring confidence as to their own notes, and so staving off a possible panic; yet the result of this action proved that even in Scotland, where Bank of England notes are not legal

tender, the position of the bank note was not clearly defined, or at any rate generally understood, and many probably learnt for the first time that the excess of circulation over the authorised limit was not preferentially secured by the bullion apparently held against it. In England the position of the local unsecured bank note circulation is altogether illogical, but is accepted as a concession to custom and vested interests, by which so many other indefensible practices obtain their only justification. The principles of free trade are justly held not to apply to "unlimited competition" in banks of issue. The result of this system has been made only too evident in the United States in 1837, as well as in this country; but it is hard to find a sound reason why certain banks, from accident of locality or date of foundation, should exercise a beneficial privilege denied to others of no less credit. If the local issues are held to be a relief to the Bank of England, by furnishing a material portion of the circulation without an annually periodical disturbance of the central reserves, surely this is a broken reed on which to lean, for in time of panic local notes are subject to a centripetal, Bank of England notes to a centrifugal influence, and the ultimate reserve is thus exposed to a compound strain. In smooth times the national pocket-money is made up of coin, Bank of England notes, and local notes; in time of panic the desire to get rid of the last named increases with the difficulty of doing so. Sir Robert Peel was well aware that any shortcomings of our banking system are not to be dealt with by heroic remedies, and he hoped that he had provided for the gradual supersession of local by Bank of England notes; but the process has been slower than he anticipated. That it is progressive is undoubted, as the following figures will show:—

	1842.	1866.	1878.
	£	£	£
Highest	30th Apr. 8,642,000	13th Jan. 5,827,000	6th Apr. 4,646,000
Lowest	20th Aug. 7,973,000	18th Aug. 4,628,000	21st Dec. 3,909,000
Variation	669,000	1,199,000	737,000

But they also show that the fluctuation is at the worst not very formidable. If local issues could be supplanted by legal-tender notes, the country would necessarily absorb a larger amount of Bank of England notes into its permanent circulation, and every step in this direction or towards increasing the security of local issues cannot fail to be a relief in time of panic.

The subject of local bank notes has been dealt with so recently before this Society by Mr. Palgrave, Mr. Dun, and others, that it

would be superfluous or impertinent to go further into the question; yet the Tables VII and VIII (in the Appendix), taken in part from the "Bankers' Magazine" of May, 1875, may not be without interest.

From the first of these tables we see that the total notes issued by the Bank of England, and the ratio of notes in actual circulation to the total issue, rise steadily during a crisis, save that the suddenness of the crisis of 1866 caused a drain of bullion, before the 10 per cent. rate took effect, that made the actual circulation assume the alarming ratio of 97·27 per cent. to the total issue. *Pari passu*, the country note circulation contracts, but very slowly and gradually, so that in 1866 the shrinking continued for fully three months after the culminating day of the panic on 10th of May; in 1878 the decline began with the failure of the City of Glasgow Bank, but in view of the successive failures of the West of England Bank, Messrs. Tweedy, Williams, and Co., and the Helston Bank, it is not surprising that the lowest point was touched at the close of the year. It even extended into 1879, the average for January being 13 per cent. below the corrected average for the month, and in February (three weeks) 15 per cent. The second Table, VIII, shows the monthly variations of the English country issue, for an average of thirty years, 1845-74, and for the two panic years of 1866 and 1878, and the last two columns of this table show the deviation from the monthly average after allowing for the invariable expansion that takes place in spring and autumn; here we see that the result of a panic is to contract the local issues about 6 to 7 per cent. some two or three months after the panic has set in. The Scotch circulation actually increased in 1866, probably because Scotch notes were then held to be above suspicion, and were in demand. In 1878 the contraction was very sharp, in spite of the usual autumnal demand in connection with harvest operations. The Irish banks show in either year a similar decline.

The question of interest-bearing deposits is akin to that of bank notes; if a banker be truly defined as "a man who takes care of other men's money, and lets them have it when they want it," and who, therefore, is nominally liable on demand for the whole of his deposits on current account, he should not be afraid to meet engagements of which he has fixed notice. Like all parts of banking, this is a question of prudence and management, to which, when kept within bounds, it is difficult to give a logical objection; but the modern system is that of gigantic and keenly competitive savings-banks, subject to disturbances the more formidable from the fact that the deposits are in excess of the means of employing them at a profit, and are in greater masses, and are more liable to simultaneous movement. It is not at all improbable that of the deposits of the London Joint stock banks, a considerable

portion was transferred between June and December 1878, from deposit to current account, to keep up the margin on advances or to supplement the reduction caused by continual shrinkage in value of produce. But there is no scope for legislation here; the recent ill-considered attempt to fetter by taxation the practice of allowing interest on deposits, very properly collapsed at the first breath of discussion.

If a banker may issue an unsecured promise to pay on demand in the shape of a bank note, it is difficult to say that he may not issue a definite promise to pay on a certain date in the shape of an acceptance; the danger lies in the temptation to go too far, and in the fact that the system of accepting bills must lead to mercantile rather than banking transactions, and that acceptances for the most part are likely to be given against securities not easily convertible into cash. On reference to the accompanying tables, we shall see that the acceptances of the City Bank were to total liabilities in June, 1878, 40 per cent., in December, 45 per cent.; it is not unreasonable to trace a connection between this fact and the appearance of the City Bank in Table XI-1, at the head of the list, with a depreciation of $29\frac{1}{2}$ per cent. in the value of its shares.

The points which have thus far been touched on affect the welfare of the creditors of banks, and it remains to consider very briefly the interests of the proprietors. What are their duties, and what their responsibilities? How far ought they to satisfy themselves as to the good management of the bank in which they are partners, and what should be their liabilities if they fail in business? Then there are the questions of limited against unlimited liability, and of the form of published balance-sheets and audit. The assumption has already been made that balance-sheets, and consequently audits, are drawn up in the interest and for the information of shareholders rather than of creditors, and the events of 1878 have raised a cry for more thorough periodical investigation of a bank's position, and a more rigid valuation by auditors of the value of its assets. But it is difficult to follow out this proposal into actual practice. We may still say, in the words used by Sir Robert Peel (6th May, 1844):—

“I have seen no form of account which would be at all satisfactory, no form of account which might not be rendered by a bank on the verge of insolvency, if there were the intention to conceal a desperate state of affairs.”

And so with respect to auditors. These must be, if they are to be efficient, professional accountants chosen by the bank (and this would in a vast majority of cases mean by or at the recommendation of the directors), or, as was more than once suggested in the first shock of dismay caused by the failure of the City of Glasgow Bank, by auditors appointed by Government. The latter course is

not likely to be adopted, as it would entail the creation of a large Government department, and an army of inspectors, who would be perpetually engaged in the examination of accounts and securities. The Education Department has such inspectors, but our schools are a national affair. The number of those interested in banks as shareholders or depositors is very great, but there is a still greater body who are neither one nor the other, and these would naturally object to being put to expense in the interest of others. Further, though public opinion does not hold the administration of Government affairs to be either perfect or infallible, yet the fact of Government inspection of banks would be very apt to induce a feeling of false confidence, and a complete putting away of personal prudence and inquiry. Audit under Government of a balance-sheet would be equivalent to a hall-mark, and the investor would be apt to hold the Government morally at least responsible should the article prove to be but base metal. It is difficult to believe that any other system of audit would be infallible. If it were required of auditors to weigh and estimate the value of every security in the bankers' safes, they would at once assume a position of superiority to the directors and managers, and would be exposed to very heavy temptations in various ways. There have been fraudulent and reckless directors of Joint stock banks, as undoubtedly to the advantage of joint stock banking there have been fraudulent and reckless private bankers, and it will not be altogether inconceivable by the public that such bankers can find either dishonest or complaisant accountants; unless it be proposed to apply the system of audit in this sense to private as well as Joint stock banks, it is not improbable that it would be favourable to the former, for it is well known that firms of the highest standing prefer to trust implicitly to a private banker rather than to show their transactions to a board of directors of whom one or more is probably in their own line of business, and such would hardly be persuaded to expose their transactions and position, however sound, to greater publicity at the price of an ostensibly greater security. And if private banks are to be subject to audit, one more definition will have to be attempted. We have hardly yet settled—What is a pound? What is money? It will be nearly as hard to say—Who is a banker? If it be a man who has charge of other men's money, or who has lent his money to another, with or without security, the number of London bankers alone will be vastly increased, and a number of firms will find themselves unexpectedly called upon to give an account of their stewardship. Here again, as before, we shall do well to bear in mind the words of Sir Robert Peel in the speech already quoted:—

“ I do not wish to pry into the affairs of each bank, and above all, I deprecate the taking of illusive security. The public will hereafter know the names of the persons by whom banking

‘ business is to be conducted, and the public must rely on their own caution and discretion as a security against being injured or defrauded.’

These words apply rather to depositors in, and creditors of banks than to proprietors, yet recent events have shown that the injuries done to the creditors are as nothing to the ruin which a disastrous bank failure brings on the shareholders; it is not therefore surprising that of all questions connected with banking reform, that of the liability of shareholders should occupy the first place. Into the ethical questions of their moral responsibility this is not the occasion to enter; it is sufficient to remark that no more sense of responsibility appears to be felt by those who invest their all in bank shares than by those who invest in consols. In such cases a mere call could probably be only met by selling a part of the holding; failure means not only their own ruin, but that of others one degree less poor, who have thought themselves prudent in investing a part only in such securities. To such investors there is no distinction between limited and unlimited responsibility; but on behalf of a more affluent class the events of 1878 have placed the question of limited and unlimited responsibility in the front rank. The arguments on both sides are well known, that unlimited liability means a proprietary of men of straw, that limited liability tends to encourage speculation in risky ventures; that the exemption of trustees from liability would turn all banks alike into banks of limited liability with fully called-up capital, for all shares would stand in the names of trustees, colourably appointed “*ad hoc*,” that if, on the contrary, they be not exempted, all bank shares held in trust will be sold to the undue depreciation of their value; the difficulty of turning an unlimited into a limited bank without prejudice to the rights of creditors; all these points, and many more arising out of them, have lately been, and still are, under strong discussion, and need not be gone over at length. The credit of a bank, whether a private or a Joint stock bank, may be taken to rest on its reputation for prudent management, and failing that, for the possession of a substantial reserve of uncalled capital to make good a deficiency caused by improvidence or misfortune. On the first head, creditors can in either case form some sort of opinion; the style of business which any bank is doing, can be and generally is, known; on the second, though in the case of private banks, in London, at least, the paid-up capital is probably smaller relatively to liabilities than that of Joint stock banks, there is, perhaps, better opportunity of estimating the amount available in case of extreme need. A private banker’s fortune appears generally to be appraised with tolerable accuracy, and the records of the Probate Court afford means of checking the calculation from time to time. To

create a solid intact reserve of capital outside the business must be the aim and object of reform in Joint stock banking; called-up capital is in a sense useless, for in proportion as calls are made there is less to fall back on, and few boards of direction would deem themselves justified in closing a bank until a very considerable portion of the called-up capital was lost. If it be permissible to make a suggestion, some such scheme as the following might be found available, viz., that a bank might have the power to fix its liability at any sum exceeding the amount of its subscribed capital, and that it should have power to make special investments to secure this reserve capital. For instance, if a bank were to start with a capital (and liability limited to the same amount) of a million, of which 300,000*l.* is paid up, it might appropriate a part of profits to a special reserve fund; adding, in fact, as is done by some insurance companies, to paid-up capital, but without the necessity of paying on an increased capital, the large profits which bank shares are expected to yield. The amount of such capital guarantee fund, the full particulars of its investment, and the names of the trustees, should accompany all published balance sheets and official announcements, and the bank should not be at liberty to reduce it except at a general meeting, and with due respect for contracts already subsisting. Let us suppose that in the case above imagined, the bank had in course of years accumulated a reserve fund of 500,000*l.* invested in consols; the proprietors might then be at liberty to announce that their total liability was 1,500,000*l.*, of which 500,000*l.* was secured by investment in the Government funds. If the process went on long enough this reserve fund would reach a point at which it would be unreasonable to increase it further, and the proprietors might then begin to pay themselves back the capital that they originally put in. In course of time it would happen that the reserve, invested in undoubted security, would amount to the whole nominal liability. But in the meantime, it may be said, the dividends will be smaller, and the premium on the shares might be smaller; possibly so, but a bank steadily paying 5 per cent. and daily strengthening its position, whose shares are at par, is better than a bank that pays 15 per cent., and whose shares are at 200 per cent. premium, but whose capital and reserve may be lost and its proprietary unable to meet their liabilities. To make a large profit, and to spend it all, is the modern, but it was not the old-fashioned idea of the employment of banking profits. It may be said that such a scheme may be carried out without an Act of Parliament, and this is quite true, nay, it even constitutes one of its main advantages. The progress and prosperity of a nation has always been found to vary directly with the freedom from Government interference enjoyed by its citizens in their private dealings

and contracts; and having in England outlived the days of monopolies, patents, and bounties, we should beware, save under urgent necessity, of making any change in the direction of paternal supervision. In matters which directly concern public morals, or where the public is unable to protect itself, we recognise the necessity of Government interference; gambling houses and other places of a distinctly corrupting tendency are, nominally at least, put down by law. Adulterations and weights and measures are, in the interest of a public otherwise unable to protect itself, subject to official inspection, but it may be hoped that banking does not come under either of these categories. There is indeed what may appear to be a partial precedent in the case of friendly societies and insurance companies, both of which may, however, with all due deference, be looked upon as a respectable form of gambling, engaging, as they do, to pay a considerable sum at a period more or less remote, against a small present payment, and depending on a careful calculation of probabilities for the power to carry out their contracts. But in these cases legislation has not gone very far, and its efficiency has as yet scarcely been sufficiently tested.

At the outset of this paper I disclaimed the necessity for any apology in introducing its subject matter; for the manner in which it has been treated I cannot express myself with such confidence: a topic which has been dealt with before this Society by members whose names are well known as carrying weight and authority, and outside it by articles and letters innumerable in magazines and newspapers; a topic which involves questions of the widest and most vital importance to a great commercial nation, can hardly be expected, even in far more able hands, to yield results altogether new or original. But the financial history of this country and of the world shows that there is no royal road to security, wisdom, or perfection; that experience must be bought little by little; and that mankind will not be made either wise or honest by Act of Parliament. A generation ago Mr. Gilbert was of opinion that the institution of Joint stock banks, with numbers of branches, a large proprietary, unlimited responsibility, and a sufficiently numerous board of directors devoted solely to the interests of the bank, had brought about the halcyon days of banking. By the light of the City of Glasgow Bank failure his anticipations serve as a warning of the liability to error of the best informed practical judgment. An attempt to point out the difficulties attendant on any alteration of existing conditions, rather than an advocacy of a bold and spirited policy in dealing with banking affairs, is therefore submitted in all diffidence to the impartial consideration of the Society, in full conviction on the part of the writer of the present paper, that there are many members better qualified to deal with it than himself.

TABLE I.—*London Joint
Balance Sheets,**Dr.*

[000's omitted.]

	Capital Paid-up.	Reserve and Profits.	Acceptances, Credits, Rebate, &c.	Deposit and Current Accounts.	Total.
Alliance, Limited.....	800,	211,	779,	2,272,	4,062,
Central, „	100,	29,	—	1,148,	1,277,
City	600,	271,	3,230,	3,922,	8,023,
Consolidated, Limited.....	800,	223,	80,	2,967,	4,070,
County	1,500,	938,	2,183,	23,612,	28,233,
Imperial, Limited	675,	138,	292,	2,435,	3,540,
Joint	1,200,	670,	13,*	14,681,	16,564,
London and Westminster	2,000,	1,055,	845,†	26,763,	30,663,
Metropolitan, Limited.....	192,	5,	28,	319,	545,
National	1,500,	{ 130,	1,355,‡	8,361,	11,459,
		{ 107,	6,§		
South Western, Limited.....	200,	64,	2,	1,577,	1,843,
Union	1,395,	537,	3,544,	12,544,	18,020,
	10,962,	4,378,	12,358,	100,601,	128,299,
National Provincial|| .....	1,687,	1,052,	661,	27,259,	30,659,
	12,649,	5,430,	13,019,	127,860,	158,958,
Ratio (omitting } Jan.—June	8·5	3·4	9·6	78·5	= 100
Nat. Prov.) } July—Dec.	8·9	3·7	12·6	74·8	= 100
Mean	8·7	3·55	11·1	76·65	= 100

* Acceptances included in deposits.

† Acceptances not included in balance.

‡ Notes.

§ Acceptances.

|| Balance taken in May.

Dr.

[000's omitted.]

Balance Sheets,

	Capital Paid-up.	Reserve and Profits.	Acceptances, Credits, Rebate, &c.	Deposit and Current Accounts.	Total.
Alliance, Limited.....	800,	219,	617,	1,629,	3,265,
Central, „	100,	35,	—	965,	1,100,
City	600,	274,	3,267,	2,872,	7,013,
Consolidated, Limited.....	800,	227,	182,	2,560,	3,769,
County	1,500,	946,	3,301,	21,475,	27,222,
Imperial, Limited	675,	145,	399,	1,810,	3,029,
Joint	1,200,	682,	19,*	13,850,	15,751,
London and Westminster	2,000,	1,116,	719,†	22,385,	26,220,
Metropolitan, Limited.....	192,	3,	30,	177,	402,
National	1,500,	{ 140,	1,284,‡	8,098,	11,147,
		{ 100,	25,§		
South Western, Limited.....	200,	44,	2,	1,560,	1,806,
Union	1,395,	551,	4,743,	12,555,	19,244,
	10,962,	4,482	14,588,	89,936,	119,968,

* Acceptances included in deposits.

† Acceptances not included in balance.

‡ Notes.

§ Acceptances.

Stock Clearing Banks.

30th June, 1878.

Cr.

[000's omitted.]

Cash in Hand and at Call.	Government Stocks, &c., when Stated Separately.	Bills, Loans, and Other Securities.	Total.	Subscribed Capital.	
642,	184,	3,236,	4,062,	2,000,	Alliance, Limited
449,	61,	767,	1,277,	200,	Central, „
1,167,	308,	6,548,	8,023,	1,200,	City
1,130,	258,	2,681,	4,070,	2,000,	Consolidated, Limited
5,512,	3,120,	19,601,	28,233,	3,750,	County
1,002,	162,	2,376,	3,540,	2,250,	Imperial, Limited
1,607,	1,080,	13,878,	16,564,	4,000,	Joint
3,981,	3,999,	22,683,	30,663,	10,000,	London and Westminster
65,	5,	475,	545,	260,	Metropolitan, Limited
2,149,	925,	8,385,	11,459,	2,500,	National
429,	103,	1,311,	1,843,	1,000,	South Western, Limited
4,660,	2,590,	10,770,	18,020,	4,500,	Union
22,793,	12,795,	92,711,	128,299,	33,661,	National Provincial
4,772,	7,646,	18,241,	30,659,	3,112,	
27,565,	20,441,	110,952,	158,958,	36,773,	
17.7	9.9	72.4	= 100	—	Jan.-June { Ratio (omitting July-Dec. { Nat. Prov.)
19.5	9.7	70.8	= 100	—	
18.6	9.8	71.6	= 100	—	Mean

31st December, 1878.

Cr.

[000's omitted.]

Cash in Hand and at Call.	Government Stocks, &c., when Stated Separately.	Bills, Loans, and Other Securities.	Total.	Subscribed Capital.	
554,	183,	2,528,	3,265,		Alliance, Limited
289,	61,	750,	1,100,		Central, „
725,	122,	6,166,	7,013,		City
666,	390,	2,713,	3,769,		Consolidated, Limited
5,480,	3,336,	18,406,	27,222,		County
518,	128,	2,383,	3,029,		Imperial, Limited
1,862,	1,080,	12,809,	15,751,		Joint
5,102,	3,198,	17,920,	26,220,		London and Westminster
48,	4,	350,	402,		Metropolitan, Limited
2,210,	1,205,	7,732,	11,147,		National
515,	188,	1,103,	1,806,		South Western, Limited
5,354,	1,685,	12,205,	19,244,		Union
23,323,	11,580,	85,065,	119,968,		

TABLE II.—English

Balance Sheets,

Dr.

[000's omitted.]

	Capital Paid-up.	Reserve, Dividends, and Undivided Profits.	Notes, Acceptances, Rebate, &c.	Deposit and Current Accounts.	Total.
Birmingham Joint Stock Bank, Limited	297,	407,	2,	1,653,	2,359,*
Bradford Old Bank, Limited	425,	138,	3,	1,868,	2,434,*
Cumberland Union, „	225,	116,	34,	1,739,	2,114,*
Liverpool Union	600,	237,	282,	2,242,	3,361,
Lloyd's Banking Company, Lim.	440,	300,	—	5,454,	6,194,
Manchester and County, Lim.	660,	479,	11,	4,543,	5,693,
North and South Wales	500,	263,	141,	4,943,	5,847,*
Parr's Banking Company, Lim.	393,	238,	32,	2,607,	3,270,*
Wilts and Dorset Banking Company	300,	328,	164,	3,589,	4,381,*
Yorkshire Banking Company	250,	143,	133,	2,449,	2,975,
	4,090,	2,649,	802,	31,087,	38,628,
Ratio, Jan.—June	100.6	6.9	2.1	80.4	= 100
„ July—Dec.	100.9	7.0	2.1	80.0	= 100
„ Mean of year	100.75	6.95	2.1	80.2	= 100

* “Economist,” 19th May, balance of

Dr.

[000's omitted.]

Balance Sheets,

	Capital Paid-up.	Reserve, Dividends, and Undivided Profits.	Notes, Acceptances, Rebate, &c.	Deposit and Current Accounts.	Total.
Birmingham Joint Stock Bank, Limited	297,	410,	2,	1,682,	2,391,
Bradford Old Bank, Limited....	425,	142,	3,	1,836,	2,406,
Cumberland Union „	225,	124,	33,	1,769,	2,151,
Liverpool Union	600,	286,	339,	2,201,	3,426,
Lloyd's Banking Company, Lim.	440,	351,	—	4,958,	5,749,
Manchester and County, Lim.	660,	480,	14,	5,003,	6,157,
North and South Wales	500,	267,	150,	4,165,	5,082,
Parr's Banking Company, Lim.	492,	250,	31,	3,052,	3,825,
Wilts and Dorset Banking Company	300,	341,	111,	3,578,	4,330,
Yorkshire Banking Company....	250,	70,	123,	2,399,	2,842,
	4,189,	2,721,	806,	30,643,	38,359,

Provincial Banks.

30th June, 1878.

Cr.

[000's omitted.]

Cash and at Call.	Government Stocks, &c.	Bills Discounted, Loans, Overdraughts, &c.	Total.	Subscribed Capital.	
119,	395,	1,845,	2,359,	2,968,	{ Birmingham Joint Stock Bank, Limited Bradford Old Bank, Limited Cumberland Union, " Liverpool Union Lloyd's Banking Company, L. Manchester and County, Lim. North and South Wales Parr's Banking Company, Lim. { Wilts and Dorset Banking Company Yorkshire Banking Company
609,	24,	1,801,	2,434,	1,061,	
206,	90,	1,818,	2,114,	540,	
803,	—	2,558,	3,361,	600,	
689,	684,	4,821,	6,194,	2,750,	
—	142,	5,551,	5,693,	4,400,	
1,550,	511,	3,786,	5,847,	500,	
605,	351,	2,314,	3,270,	1,964,	
434,	1,824,	2,123,	4,381,	450,	
700,	100,	2,175,	2,975,	500,	
5,715,	4,121,	28,792,	38,628,	15,733,	
15'2	10'7	74'1	= 100	—	Ratio, Jan-June
15'7	8'0	76'3	= 100	—	„ July-Dec.
15'45	9'35	75'2	= 100	—	„ Mean of year

31st December, 1877 : no later figures obtainable.

31st December, 1878.

Cr.

[000's omitted.]

Cash and at Call.	Government Stocks, &c.	Bills Discounted, Loans, Overdraughts, &c.	Total.	Subscribed Capital.	
182,	400,	1,809,	2,391,		{ Birmingham Joint Stock Bank, Limited Bradford Old Bank, Limited Cumberland Union, " Liverpool Union Lloyd's Banking Company, L. Manchester and County, Lim. North and South Wales Parr's Banking Company, Lim. { Wilts and Dorset Banking Company Yorkshire Banking Company
703,	24,	1,679,	2,406,		
189,	90,	1,872,	2,151,		
900,	—	2,526,	3,426,		
714,	484,	4,551,	5,749,		
—	153,	6,004,	6,157,		
1,188,	431,	3,463,	5,082,		
732,	128,	2,965,	3,825,		
722,	1,289,	2,319,	4,330,		
691,	100,	2,051,	2,842,		
6,021,	3,099	29,239,	38,359,		

TABLE III.—*Scotch*
Balance Sheets,

Dr.

[000's omitted.]

	Capital Paid.*	Reserve, &c.	Acceptances.	Deposits.	Notes.	Total.
Bank of Scotland (Chartered)	1,250,	855,	2,362,	10,509,	604,	15,580,
British Linen Company Bank } (Chartered)	1,000,	572,	562,	7,456,	552,	10,142,
Clydesdale Banking Company	1,000,	648,	628,	6,625,	646,	9,547,
Commercial Bank of Scotland	1,000,	509,	446,	9,198,	839,	11,992,
National Bank of Scotland	1,000,	663,	1,687,	11,058,	660,	15,068,
Royal Bank of Scotland (Chartered)	2,000,	633,	604,	10,549,	739,	14,525,
Union Bank of Scotland	1,000,	471,	397,	8,958,	791,	11,617,
	8,250,	4,351,	6,686,	64,353,	4,831,	88,471,

* Capital

Dr.

[000's omitted.]

Balance Sheets,

	Capital Paid.	Reserve, &c.	Acceptances.	Deposits.	Notes.	Total.
Bank of Scotland	1,250,	852,	1,958,	11,799,	704,	16,563,
British Linen Company Bank* ..	—	—	—	—	—	—
Clydesdale Banking Company	1,000,	630,	511,	6,318,	628,	9,087,
Commercial Bank of Scotland	1,000,	499,	368,	8,643,	858,	11,368,
National "	1,000,	672,	1,689,	10,559,	769,	14,689,
Royal "	2,000,	810,	731,	9,910,	701,	14,152,
Union "	1,000,	472,	226,	8,567,	761,	11,026,
	—	—	—	—	—	—

* Balance sheet not

TABLE IV.—*Irish*
Balance Sheets,

Dr.

[000's omitted.]

	Capital Paid.	Reserve, &c.	Acceptances.	Notes.	Deposits.	Total.
Hibernian Joint Stock	500,	293,	—	—	2,209,	3,002,
Munster Banking Company, L.	350,	247,	34,	—	2,831,	3,462,
Royal Bank of Ireland	300,	239,	39,	—	1,826,	2,399,
Ulster Banking Company	300,	358,	6,	622,	3,514,	4,800,
	1,450,	1,137,	79,	622,	10,375,	13,663,

Dr.

[000's omitted.]

Balance Sheets,

	Capital Paid.	Reserve, &c.	Acceptances.	Notes.	Deposits.	Total.
Hibernian Joint Stock	500,	292,	—	—	2,081,	2,873,
Munster Banking Company	350,	267,	35,	—	2,686,	3,338,
Royal Bank of Ireland	—	—	—	—	—	—
Ulster Banking Company	—	—	—	—	—	—
	—	—	—	—	—	—

Banks.

1st July, 1878.

[000's omitted.]

Cr.

Cash.	At Call, Government Stocks, &c.	Other Securities.	Total.		
465,	3,554,	11,561,	15,580,	28th Feb., 1878	Bank of Scotland (Chartered)
357,	2,211,	7,574,	10,142,	15th April, '78	{ British Linen Company Bank (Chartered)
1,075,	1,088,	7,384,	9,547,	31st Dec., '77	Clydesdale Banking Company
786,	2,731,	8,475,	11,992,	31st Oct., '77	Commercial Bank of Scotland
681,	3,296,	11,091,	15,068,	1st Nov., '77	National Bank of Scotland
749,	2,946,	10,830,	14,525,	21st Sept., '77	Royal Bank of Scotland (Chartered)
645,	2,649,	8,323,	11,617,	2nd April, '78	Union Bank of Scotland
4,758,	18,475,	65,238,	88,471,		

all paid.

1st January, 1879.

[000's omitted.]

Cr.

Cash.	At Call, Government Stocks, &c.	Other Securities.	Total.		
587,	3,063,	12,913,	16,563,	28th Feb., 1879	Bank of Scotland
—	—	—	—	15th April, '79	British Linen Company Bank
925,	1,090,	7,072,	9,087,	31st Dec., '78	Clydesdale Banking Company
863,	1,308,	9,197,	11,368,	31st Oct., '78	Commercial Bank of Scotland
706,	2,471,	11,512,	14,689,	1st Nov., '78	National „
732,	2,169,	11,251,	14,152,	20th Sept., '78	Royal „
561,	1,860,	8,605,	11,026,	2nd April, '79	Union „
—	—	—	—		

published until June.

Banks.

1st July, 1878.

[000's omitted.]

Cr.

Cash and at Call.	Government Stocks, &c.	Other Securities.	Total.	Subscribed Capital.	
330,	with cash	2,672,	3,002,	2,000, 31st Oct., 1877	Hibernian Joint Stock
224,	286,	2,952,	3,462,	1,000, 29th June, '78	Munster Banking Company, L.
587,	with cash	1,812,	2,399,	1,500, 31st Aug., '78	Royal Bank of Ireland
769,	434,	3,597,	4,800,	1,200, 31st Aug., '78	Ulster Banking Company
1,910,	720,	11,033,	13,663,	5,700,	

1st January, 1879.

[000's omitted.]

Cr.

Cash and at Call.	Government Stocks, &c.	Other Securities.	Total.		
266,	with cash	2,607,	2,873,	31st Oct., 1878	Hibernian Joint Stock
236,	282,	2,820,	3,338,	31st Dec., '78	Munster Banking Company
—	—	—	—	31st Aug., '79	Royal Bank of Ireland
—	—	—	—	31st Aug., '79	Ulster Banking Company
—	—	—	—	—	

TABLE V.—*Bank of England.*

<i>Dr.</i>		[000's omitted.]					<i>Balance Sheet,</i>
		Capital Paid.	Reserve, &c.	Acceptances.	Public Deposits.	Other Deposits.	Total.
Ratio		14,553, 30·5	3,078, 6·4	253, 0·5	7,940, 16·6	21,953, 46·0	47,777, = 100

<i>Dr.</i>		[000's omitted.]					<i>Balance Sheet,</i>
		Capital Paid.	Reserve, &c.	Acceptances.	Public Deposits.	Other Deposits.	Total.
Ratio		14,553, 28·3	3,223, 6·2	259, 0·5	5,577, 10·8	27,872, 54·2	51,484, 100

TABLE VA.—*Bank of England.*

<i>Dr.</i>		[000's omitted.]					<i>Balance Sheet,</i>
		Capital.	Reserve, &c.	Acceptances.	Public Deposits.	Other Deposits.	Total.
Ratio		14,553, 36·39	3,254, 8·13	402, 1·01	8,544, 21·37	13,236, 33·10	39,989, 100

<i>Dr.</i>		[000's omitted.]					<i>Balance Sheet,</i>
		Capital.	Reserve, &c.	Acceptances.	Public Deposits.	Other Deposits.	Total.
Ratio		14,553, 30·67	3,533, 7·45	559, 1·17	7,965, 16·79	20,840, 43·92	47,450, 100

TABLE VI.

Dr. [000's omitted.] *Summary of Balance Sheets*

	Capital Paid.	Reserve, &c.	Acceptances.	Notes.	Deposits.	Total.
London clearing banks	8·5	3·4	9·6	—	78·5	100
Country banks	10·6	6·9	2·1	—	80·4	100
Scotch „	9·2	4·9	7·5	5·4	73·0	100
Irish „	10·7	8·4	0·6	4·2	76·1	100
Mean	9·75	5·9	4·95	2·4	77·0	100

Bank of England	30·5	6·4	0·5	—	62·6	100
-----------------------	------	-----	-----	---	------	-----

Dr. [000's omitted.] *Summary of Balance Sheets*

	Capital Paid.	Reserve, &c.	Acceptances.	Notes.	Deposits.	Total.
London clearing banks	8·9	3·7	12·6	—	74·8	100
English provincial „	10·9	7·0	2·1	—	80·0	100
Bank of England	28·3	6·2	0·5	—	65·0	100

(Banking Department.)

25th June, 1878.

[000's omitted.]

Cr.

Cash.	Government Stocks.	Other Securities.	Total.
10,858, 22·7	16,208, 33·9	20,711, 43·4	47,777, = 100

24th December, 1878.

[000's omitted.]

Cr.

Cash.	Government Stocks.	Other Securities.	Total.
9,342, 18·2	14,235, 27·5	27,907, 54·3	51,484, = 100

(Banking Department.)

27th December, 1865.

[000's omitted.]

Cr.

Cash.	Government Securities.	Other Securities.	Total.
7,591, 18·98	9,891, 24·74	22,507, 56·28	39,989, 100

27th June, 1866.

[000's omitted.]

Cr.

Cash.	Government Securities.	Other Securities.	Total.
5,218, 11·0	11,348, 23·91	30·884, 65·09	47,450, 100

TABLE VI.

(Percentages), 1st July, 1878.

[000's omitted.]

Cr.

Cash and at Call	Government Stocks, &c.	Other Securities.	Total.	Ratio of Total Capital to Liabilities.	
17·7	9·9	72·4	100	26·23	{ London clearing banks (ex- cluding National Provincial) English country banks Scotch banks Irish „
12·0	11·0	77·0	100	40·72	
5·4	20·9	73·7	100	9·32	
14·0	5·2	80·8	100	10·61	
12·275	11·75	75·975	100	21·72	Mean
22·7	33·9	43·4	100	30·46	Bank of England

(Percentages), 1st January, 1879.

[000's omitted.]

Cr.

Cash and at Call.	Government Stocks, &c.	Other Securities.	Total.	Ratio of Total Capital to Liabilities.	
19·5	·7	70·8	100	30·65	London clearing banks English country „ Bank of England
15·7	8·0	76·3	100	41·01	
18·2	27·5	54·3	100	28·26	

TABLE VII.—*Showing the Effect of the Crises of 1866 and 1878, on the Bank Note Circulation of the United Kingdom.*

1878.	Bank of England.			Unsecured Circulation.		
	Rate.	Total Issue.	Ratio of Actual Circulation to Total Issue.	English Banks. 6,306,697 <i>l.</i> = 100.	Scotch Banks. 2,749,271 <i>l.</i> = 100.	Irish Banks. 6,354,494 <i>l.</i> = 100.
July 6	3½	36,524	78·09	67·84	64·54	59·20
„ 13	—	36,602	77·49	67·97	—	—
„ 20	—	36,319	77·28	67·29	—	—
„ 27	—	36,131	76·81	66·46	—	—
Aug. 3	4	35,999	77·94	66·20	67·91	58·17
„ 10	—	35,791	78·72	66·04	—	—
„ 17	5	35,677	77·83	65·20	—	—
„ 24	—	35,674	76·98	64·35	—	—
„ 31	—	35,979	75·23	64·14‡	65·49	55·91
Sept. 7	—	36,655	74·50	65·13	—	—
„ 14	—	37,185	72·31	66·01	—	—
„ 21	—	37,620	70·96	67·50	—	—
„ 28	—	37,968	70·03	67·39	68·41	60·64
Oct. 5	*	37,896	73·87	72·09	**	—
„ 12	—	38,222	75·71	73·30	—	—
„ 19	6	37,434	79·72	72·57	—	—
„ 26	—	38,332	78·47	70·98	54·74	68·30
Nov. 2	—	39,517	76·19	70·72§	—	—
„ 9	—	39,662	75·42	70·62	—	—
„ 16	—	39,847	73·66	69·65	—	—
„ 23	5	40,296	72·02	68·83	60·90	67·62
„ 30	—	40,508	70·99	67·83	—	—
Dec. 7	—	40,429	72·73	66·79	—	—
„ 14	†	40,162	77·80	63·12||	—	—
„ 21	—	40,595	79·62	63·00	57·17	61·25
„ 28	—	41,480	79·82	63·04	—	—
1879.						
Jan. 4	—	42,190	77·70	63·29	—	—
„ 11	—	42,729	77·32	64·32¶	—	—
„ 18	4	43,214	75·59	63·29	47·44	54·82
„ 25	—	43,669	76·12	61·86	—	—
Feb. 1	3½	43,951	73·16	60·65	—	—
„ 8	—	44,365	70·90	59·39	—	—
„ 15	—	44,935	67·71	58·20	44·45	51·55

* Failure of City of Glasgow Bank.

† „ West of England Banks.

‡ A decrease of 7,359*l.* by failure of Loughborough Bank.§ „ 10,421*l.* „ Chesterfield and Derbyshire Bank.|| „ 83,535*l.* „ West of England Bank.¶ „ 49,869*l.* „ Tweedy, Williams, and Co.** „ 72,921*l.* „ City of Glasgow Bank.

TABLE VII.—*Showing the Effect of the Crises of 1866 and 1878—Contd.*

1866.	Bank of England.			Unsecured Circulation.		
	Rate.	Total Issue.	Ratio of Actual Circulation to Total Issue.	English Banks. 7,365,726 <i>l.</i> = 100.	Scotch Banks. 2,749,271 <i>l.</i> = 100.	Irish Banks. 6,354,494 <i>l.</i> = 100
Jan. 6	8	27,029	80·56	78·23	72·16	65·90
" 13	—	26,724	80·25	79·11	—	—
" 20	—	26,834	77·77	78·18	—	—
" 27	—	26,907	77·94	76·32	—	—
Feb. 3	—	27,000	81·34	75·28†	64·96	61·27
" 10	—	26,922	78·06	74·66	—	—
" 17	—	27,050	76·75	73·85	—	—
" 24	7	27,971	73·51	72·87	—	—
Mar. 3	—	28,113	73·87	72·39	67·25	61·13
" 10	—	28,150	73·65	72·53‡	—	—
" 17	6	28,427	72·19	72·72	—	—
" 24	—	28,554	72·27	73·38	—	—
" 31	—	28,502	75·85	75·03	64·27	61·49
Apl. 7	—	28,485	78·39	77·46	—	—
" 14	—	28,363	77·72	78·06	—	—
" 21	—	28,041	79·53	77·44	—	—
" 28	—	28,005	79·13	76·24	68·09	61·98
May 5	7	27,712	82·53	76·73§	—	—
" 12	10*	27,294	81·86	76·73	—	—
" 19	—	26,851	97·27	74·62	—	—
" 26	—	26,300	96·84	70·92	73·51	58·27
June 2	—	26,434	98·41	68·88	—	—
" 9	—	27,620	92·15	66·97	—	—
" 16	—	28,695	90·48	65·49	—	—
" 23	—	29,147	86·13	64·59	71·94	50·48
" 30	—	29,170	85·09	64·26||	—	—
July 7	—	29,147	88·55	65·27	—	—
" 14	—	28,287	89·05	65·61	—	—
" 21	—	27,919	91·05	64·82	70·92	46·84
" 28	—	27,893	90·57	63·91	—	—
Aug. 4	—	27,932	91·36	64·13	—	—
" 11	—	27,775	90·16	64·71	—	—
" 18	—	28,152	87·16	63·83	70·85	47·82

* Failure of Overend, Gurney, and Co.

† A decrease of 69,849*l.*‡ " 25,336*l.*§ " 14,866*l.*|| " 5,624*l.*

TABLE VIII.—*Showing the Variations in the Monthly Average of English Local Note Circulation.*

	Average of 30 Years 1845-74. [000's omitted.]	6,084,000l. = 100.	1866. Average. [000's omitted]	5,150,100l. = 100.	1878. Average. [000's omitted.]	4,356,892l. = 100.	Deviation from Average in Years of Panic.	
							1866.	1878.
							Per cent.	Per cent.
January	6,181,	102	5,740,	111	4,523,	104	+ 9	+ 2
February	6,026,	99	5,410,	105	4,380,	100	+ 6	+ 1
March	6,045,	99	5,320,	103	4,401,	101	+ 4	+ 2
April	6,369,	105	5,620,	109	4,642,	106	+ 4	+ 1
May	6,261,	103	5,420,	105	4,593,	105	+ 2	+ 2
June	5,963,	98	4,820,	93	4,294,	98	- 5	Nil
July	5,905,	97	4,700,	91	4,250,	97	- 6	„
August	5,794,	95	4,650,	90	4,128,	95	- 5	„
Sept.	5,932,	97	4,720,	91	4,160,	96	- 6	- 1
October	6,383,	105	5,290,	103	4,550,	104	- 2	- 1
Nov.	6,210,	102	5,200,	101	4,373,	100	- 1	- 2
Dec.	5,947,	98	4,980,	97	3,984,	91	- 1	- 7

DISCUSSION on MR. J. B. MARTIN'S PAPER.

MR. R. H. PATTERSON said he was inclined to think that the apprehensions in regard to the hazards of banking were at present excessive. The failure of the City of Glasgow Bank was as exceptional as any event of the kind could possibly be. The business of the country could not be conducted, or legislation carried on, on the hypothesis of fraud; but in the case he alluded to, there was not only fraud, but fraud conducted deliberately and persistently over a number of years. It was not merely mismanagement, but persistent fraud, and he did not think that any legislation could provide against a disaster of that kind. It was impossible to manage a bank on the hypothesis of fraud. He thought a great deal more could be done by means of an audit, than the author of the paper seemed to think. The auditors could easily ascertain if the bank's capital were in existence, by requiring the production of the reserve of coin and consols; and if these were in existence, a sudden collapse

of the bank was impossible. While commiserating the losses of the bank shareholders, he thought there was certainly a word or two to be said on the other side, on behalf of the public. The lecturer had said very truly that the losses of a bank's shareholders were much more heavy than those of the depositors, or anybody else; but was it not the case that every trader and every trading company in the case of failure must always lose, and deservedly lose, more than those they traded with, and by whom they were trusted?

Mr. RICHARD B. MARTIN deprecated Government interference either in banking or commercial matters. If it were found to be necessary to have any legislation on the subject of limited liability, the line at which such interference ought to be drawn appeared to him to be a very clear one. In any banking or other company where a partner had not the full and perfect right of access to all books and documents, and simply became a partner as an investment, and where his copartners were without any practical control over his admission as one of their number, there the liability of each shareholder ought to be limited to such an amount as the deed of partnership might determine; so that in the result every company that was registered would be *ipso facto* limited, and all private firms would be as independent as heretofore. It was all very well for Government to interfere with and legislate in the interests of the public for traders who had a practical monopoly, such as railways and canals, but in a business such as banking, where any person dissatisfied with one bank, had merely to go to another, there was no more necessity for so doing than in any other trade. The mere loss of money deposited on a current account with a banker, did not cause wide-spread misery, and the widows and clergymen who were reduced to penury by the failure of a bank in which they were partners, theoretically deserved no more sympathy than they would have received had they taken a share in a butcher's or ironmonger's business, of the details of which they had no knowledge, and in the management of which they had no share. It was highly undesirable to increase statute offences. There was a great and growing tendency among lawyers, and even judges, to refine upon legal enactments, so as to constitute offences never contemplated by the framers of the Acts of Parliament. An instance in point was the dictum of the Master of the Rolls that "trusts" were illegal, because they did not fulfil all the conditions of the Limited Liability Acts: Acts that were passed for a totally distinct purpose, and before "trusts" were invented. It would be a bad day for England, and for English freedom, when we adopted as an axiom of law, that nothing was legal unless it was specially made so in our statute book. In conclusion, he remarked that it was impossible to analyse the figures of Mr. J. B. Martin's paper without careful consideration, but that the whole paper was suggestive of many subjects that deserved the study of members of the Society.

Mr. C. WALFORD said that on the question of legislation for

banks he took a somewhat different view from that which he held in reference to the question of legislation generally. He had often said that legislation was a disadvantage to commercial matters rather than an advantage; but there was a circumstance connected with banking that should not be lost sight of, namely, that the condition of a large number of unlimited banks was not of their own seeking. They were the creatures of the law. They could not at the time they were founded be registered or constituted in England in any other form as unlimited banks. All the early Acts providing limited liability for other joint stock companies exempted them, and thus were created the unlimited banks in England, which had of late occasioned so much alarm. For Scotland there had been a more wise legislation, which facilitated the establishment of chartered banks. The City of Glasgow Bank was an exception to many of the Scotch banks. As a rule, the chartered banks, which contained some limitation of liability, worked well, and prudent men could say, "If I go into this affair, I know what my loss must be." He knew a number of private banks in London that had been getting very little new business for years past. The number of accounts that some of these had recently opened was quite surprising, and this had been occasioned by the doubt as to the security offered by unlimited banks, on the ground that many of the more responsible proprietors would sell out. He hoped that a measure would be passed during the present session to enable unlimited banks to become limited in some form or degree, and thus compensate for the injury that had been inflicted on them first by an unwise legislation, and lastly by an equally unwise panic. After recent events, there really was less rather than more occasion for alarm.

Mr. BOTLY said that when the vast importance of joint stock banks, both in this country and the colonies, was considered in connection with the late disastrous occurrences, he thought that some legislative interference could not be much longer delayed. He considered that the liability of trustees should go no further than the limit of the value of the estate in trust. The author, in the last paragraph of the paper, had spoken of Mr. Gilbart, whom he (Mr. Botly) knew personally, and with whom and some others he established the Wilts and Dorset Bank. This bank had been established and carried on on the principle of the original Scotch banks. It paid a very excellent percentage, had a very large constituency, and he believed held as high a position as any country bank in the kingdom. The City of Glasgow Bank failure and all other bank failures had resulted principally from not adopting those sound principles of banking enunciated by Mr. Gilbart, the founder of joint stock banking, and now by Mr. Martin. He was a proprietor in seven banks, and he might say that he had never had one moment's uneasiness during any panic or scare. If people asked him as to their investments, he gave them no advice, but told them not to sell their shares at an enormous sacrifice, as in any event their liability would not cease. He hoped that one of the results of the paper would be to lead to some legislative enactment, by which the liability would be fixed to the amount paid on the shares

or some such equitable arrangement. An excellent suggestion had been made the other day by one of the officials of a colonial bank, that a primary reserve fund equal to the amount of a share should be established, the money being invested in consols or in some way by which there would be a Government fund as security. This would give the public more faith in the stability of a bank; and he thought that some such plan would be very advantageous, as ensuring a more wealthy proprietary.

Mr. HAMMOND CHUBB said it was very difficult to discuss a paper in which so much detail had been so admirably put forward. Mr. Martin at one part of the paper seemed to say that joint stock companies' balance sheets were issued presumably for the proprietors of the banks rather than for the customers or the public; but he (Mr. Chubb) could not help thinking that these balance sheets were really put to other and very important purposes, and that but for them we should be very hard put to it for information on banking matters. The use made of them in the present paper was a case in point. A comparison had been made in the paper between the position of banks after the panic of 1866 and the panic (as the author had called it, although he (Mr. Chubb) would call it the crisis) of 1878. There had been several panics; but every one of them had had a different origin. The condition of things previous to 1866 was very different to that existing in 1878. Both these periods had been ushered in by the collapse of a great institution. In 1866 it was the collapse of Overend, Gurney, and Co., but it was not the failure of one firm that caused the crisis so much as the condition of things then existing, of which that firm was a type. The condition of things then was such that firms like Overend and Gurney and other financial concerns could give a sort of false or spurious currency to property in undertakings, which should alone be created by means of accumulated capital. A general idea then possessed men's minds that whoever had any property in houses, ships, or railways, or undertakings of any kind, was, in fact, in possession of so much money, and the institutions of which the Gurneys were a representative, aided them to realise this idea by converting such property, by means of debentures and bills, and various financial operations, into a sort of currency, and thus enabled large undertakings to be carried on for a considerable time that ought never to have been carried on at all. There was a false system of credit existing at that time, and the panic was brought on by the collapse of that false system. There was now a very different condition of things. The present crisis had been ushered in by the great calamity of the failure of the City of Glasgow Bank, than which nothing could be worse; but the condition of things which this failure implied was rather the badness of trade, the loss that had been experienced in the reduction of prices, and in that general shrinkage in the value of almost all undertakings and business, which had formed the burden of so many of the papers read lately in the Society's room, and which had been especially investigated in the admirable paper on prices in January last. The figures which Mr. Martin had so clearly brought

out, showed conclusively the difference between the two periods. After the panic of 1866 the deposits in the hands of bankers were reduced but very little, and only those banks fell in public estimation which had lent themselves to the false principles then in vogue. Subsequent, however, to the late crisis these deposits are seen to be greatly diminished, and these figures bear testimony to the period of low prices and general depreciation which we are now passing through.

Mr. HAROLD BROWN said that the author of the paper had given such a mass of figures as must satisfy the most ardent statistician present, and it was impossible to digest or deal with them offhand. The tables showed curiously enough that the unlimited and the largest banks were those that had suffered most during the last general depression, and that they were also those banks whose general liabilities bore the largest proportion to the paid up capital. This showed, in his opinion, that people would not trust banks who had a very large liability in comparison to their actual paid up capital in the same manner as they would trust banks whose capital was larger in proportion. He differed from the author and his brother in deprecating legislation in banking matters, and thought that in the present day judicious and moderate legislation might be introduced to advantage. In reference to the proposal of the author to invest the reserve funds in consols, it was true that large reserve funds were set out in the balance sheets of many companies; but this was the case with the City of Glasgow Bank. As he understood balance sheets and auditors' certificates as at present framed, those reserves need not necessarily exist in consols except on the one day in the year on which the balance sheet was struck. He ventured to think that there should be some restriction placed upon a bank in regard to its mode of investment and dealing with its reserve fund. There was another point he would mention for the purpose of corroborating what Mr. Martin had said, namely, the proportion between interest bearing deposits and non-interest bearing deposits. He had been told by the manager of one of the largest London joint stock banks, that most of their money cost them less than one per cent. per annum. If this were the case, all he could say was that in prosperous times the amount the banks made in the way of profits must be very much greater than shown in the balance sheets. Joint stock banks had been declaring dividends in the past year which traders could only hope to obtain in prosperous years. Last year was a bad one, and they must have been declaring dividends they had not obtained by their trading in that year, and they must have been keeping back a reserve in the more prosperous past, with the object of dividing it when the bad time came. It was lucky for the shareholders that this should be the case, and it was also lucky that their balance sheets concealed from them the true state of affairs. This was strong speaking, but he felt, from careful consideration of the subject, that shareholders required to be protected even against themselves. He had given a considerable amount of attention to the question of the proprietary of banks, and it would be found on examination of the lists of the greatest joint stock banks,

that the largest proportion of the proprietors consisted of spinsters, widows, country clergymen, small traders, and officers in the army and the navy. It would also be found that a very large percentage of the proprietors held only from one to ten shares, and many of such shareholders were unquestionably those who in a crisis would be unable to meet their liabilities. The other portion of the shareholders would doubtless be able to pay heavy calls; but it was scarcely fair that they should practically be called upon to meet the entire liabilities, whilst the weak shareholders received their share of the profits, and ran little risk as they were unable to bear their share of any loss. The reasons he would venture to give for legislation on this question were as follows:—The helplessness of the shareholders to protect themselves or to exercise any real control over their own affairs. They dared not do it. No shareholders would venture to get up at an annual meeting and cast any serious aspersions on the management of a large bank. He would only be depreciating his own property, and in such an event the best thing he could do was to sell his shares. Again, the banks were to a very great extent helpless. They suffered from publicity, and unfortunately their credit was so sensitive that if they disclosed the true state of their affairs in their balance sheets, especially at the present time, they might collapse. They must practise some concealment to protect themselves, and they required a stronger back than their own to fall back upon. The only hope for them was, in his opinion, government interference. At present there was no chance of obtaining legislation on the subject, but he believed the time would in due course come when it would be secured.

Mr. WILLANS agreed that we were in danger of suffering rather from over-legislation than from lack of legislation. He could not help feeling that it was one of the most satisfactory features of the figures presented by Mr. Martin in his able and comprehensive paper, that the depletion which we had for sometime been suffering in the general business of the country, had extended to bank shares, for there was nothing more unwholesome in the condition of values some years ago, than the high prices of limited and unlimited bank shares. He took the trouble some time ago of perusing a list of the market prices of these shares, and of testing them by the dividends paid year by year, and he found upon an average that they scarcely yielded more than 5 per cent. upon the nominal value of the shares; and for this paltry 5 per cent. the shareholders were running all the risks of the unlimited liability system. It was one of the most satisfactory features in the paper, that it showed the extent to which bank shares had participated in the general depletion of unwholesome values, with all their evil consequences in luxury and extravagance, that had prevailed only a few years ago. Whilst deprecating over legislation, however, they could not forget that in dealing with this question they were dealing with corporations that were already more or less the subjects of legislation. They had no longer to choose between leaving the evils of unlimited liability, to be corrected by the common law of the land, and dealing with it specially. He thought that some reasonable

provision should be made for these unlimited banks to register themselves as limited in one degree or another; at the same time, limited liability banks or companies should have the opportunity also of re-registering themselves with an extension of their liability. He (Mr. Willans) also thought that legislation was required in relation to the question of audit, and that the Bill lately introduced by the Chancellor of the Exchequer could be very much amended in this respect. He thought that the audit should be made compulsory, not once only, but twice a-year, and provision ought also to be made for something like a continuous audit. He did not altogether believe in professional auditors, who were almost as liable to be hood-winked as private auditors. The auditors ought at all times to have access to all the books of the company, and to be able to certify that the weekly returns presented to the directors were such as to enable them to see clearly the state and course of the business of the bank or other company, and to discharge their duties intelligently and confidently, in the interests of the shareholders. So far he thought legislation was both justifiable and necessary.

Mr. C. N. NEWDEGATE, M.P., having made a few observations,

Mr. PHILIP VANDERBYL said that any amount of interference by the Government would never prevent such a calamity as the failure of the City of Glasgow Bank. He thought that one important point had been omitted by the author, namely, the proportion of the calls or claims made on shareholders of unlimited banks in case of failure, compared with the amounts left uncalled in case of limited banks. He ventured to think that the so-called limited banks with shares of 100*l.*, and only 10*l.* or 20*l.* called up, would be found to have a larger proportion of uncalled capital than had been on an average claimed from shareholders of unlimited banks in case of failure (not including the City of Glasgow Bank, which must be considered exceptional), and he for one did not therefore see the necessity for converting the unlimited banks into limited. The desire to do so had only arisen from panic and clamour. In the Bill of the Chancellor of the Exchequer, the term "reserve liability" is proposed to be applied to the unlimited banks desirous of becoming limited to a certain extent. This is a senseless term, requiring explanation, and it would be preferable to use the term "*specified liability*" for these banks, and the share certificates should have the liability stated or *specified* on them, say for double or treble the amount of the nominal capital, but in no case exceeding four times the nominal capital. At present the Limited Liability Acts allow banks to become practically unlimited. Now as to "reserve fund," which had also been mentioned, people not practically acquainted with banking were under the impression that this ought to be invested in consols, but if that were done, the shareholders would have to be satisfied with less dividends; well then the public would not invest in bank shares. To avoid any misapprehension it would be well to make people understand that "reserve fund" is only another term for "undivided profits," and that it is for the advantage

of shareholders to work with this money until it is wanted to equalise dividends. It was difficult to say where banking began, or where it terminated, and there was no more need to control by Act of Parliament a trade in money than a trade in any other commodity. Trading in money or banking did not differ very much from trading in produce. The discounting of trade bills is generally considered one of the most legitimate of banking operations, whereas the accepting of bills by banks is usually looked upon with suspicion. Shareholders often want to know the amount of their bank's acceptances, but during a panic (like 1866) it has happened that the bills discounted proved worthless, while the acceptances, which were really liabilities, not only yielded a better profit, but being accompanied by bills of lading with a margin left no loss.

The CHAIRMAN (Mr. Wm. Newnarch, F.R.S.), in moving a vote of thanks to Mr. Martin for his carefully prepared paper, said that Mr. Martin had followed in the steps of former investigators, and had made an useful contribution to the accumulated mass of experience and deduction which formed the scientific part of the knowledge of the business of banking and everything related to it. At the same time, looking to the experience of the last year or two, there could be no doubt that the time had come when facilities must be given to joint stock banks, whether limited or unlimited, to adopt modifications of constitution in one form or another. The subject of audit and form of balance sheets was more difficult, and on neither point were the facts ripe for legislation. There was hardly any kind of enterprise or business in the country which had advanced more markedly than the business of banking during the last twenty-five or thirty years. It might be said, perhaps, that the advancement had been somewhat too rapid, in consequence of the allowance of over liberal rates of interest by all the joint stock banks, and as a consequence, to a certain extent by the private banks. There had been a tendency to accumulate in the banks a larger part of the floating capital of the country than could be properly and adequately employed in the limited kinds of securities which alone were proper for banks to accept. He could not doubt that some of the amendments and reforms of late years that had taken place in the allowance of interest on deposits were among the most wholesome changes that had taken place in banking. There was a time when interest was allowed on current accounts in London, and that, he believed, had been entirely given up. Not the least important consequence was that during the last year or so the banks in London had recognised the fact that they were no longer bound to follow the variations of the Bank of England minimum rate of discount. The great losses of 1875 resulted in a very marked manner from the extreme accumulation of money in certain quarters, and there were always 'cute men, like Alexander Collie, who could calculate to a nicety in this direction how far they could operate. The great number of failures in 1878 of worthless and old firms were illustrations of the operation of the same causes. During the last fifteen or twenty years there had been

a considerable alteration between the relations of the money market of this country and the Bank of England. It was as true as ever that the only central reserve in this country upon which the superstructure of banking was based, was that portion of reserve which was available in the banking department of the Bank of England: and it was a reflection not free from alarm that, looking at the incessant increase year by year of the business of the country, especially in London, and the accumulation year by year of financial transactions and deposits which belonged not only to this country but to all the world, the ultimate central reserve on which dependence was placed did not in the least increase. It was now nearly thirty years since any Government inquiry was made into the facts of the case, and circumstances had entirely changed since the last inquiry was made in 1858. It was only reasonable that a reinvestigation should be made at an early opportunity.

(Owing to the length of the discussion, Mr. Martin had no time to make the usual reply).

MISCELLANEA.

CONTENTS :

	PAGE		PAGE
I.—The <i>Gazette</i> Average Prices of Corn	709	III.—Notes on Economical and Statistical Works	727
II.—Miscellaneous Statistics of the United Kingdom	724	IV.—Additions to the Library, with Notes	736

I.—*The Gazette Average Prices of Corn.*

THE following memorandum by the Comptroller of the Corn Returns “on the Diminution in the Quantities of Wheat returned as sold in the different Markets of England and Wales, and on other matters connected with the Corn Returns,” has been printed as a parliamentary paper :—

“ Various questions have been raised lately as to whether the corn returns as collected continue to be a proper basis for calculating the tithe averages. The following observations are intended to give information bearing on some of the doubts which have been expressed :—

“ 1. One of the principal questions has been as to the falling off in recent years of the quantity of wheat returned. It has been pointed out that in 1865, when the number of towns from which returns were obtained was reduced from 290 to 150, the quantity of wheat returned as sold from these 150 towns, although less than when the returns were got from 290 towns, was 3,579,623 quarters; but since then the amount has greatly declined. In 1877 the quantity was only 1,942,688 quarters, which is a diminution of 46 per cent. from 1865. It is plain that, as the question is one of price only, there is no reason why the return of a smaller quantity should not be as fair a representation of the current price as the return of a larger quantity, the selection of towns and sales being impartially made; but the diminution has naturally given rise to the notion that some inefficiency may have crept into the mode of collection, which destroys confidence in the returns and the results obtained.

“ My attention was called to the matter shortly after my appointment to this office in 1876, by the clerks who were immediately engaged in the work of compiling the returns, and who were afraid that the cause of the diminution might be that inefficiency which it was so natural to suspect. The department was also the more vigilant, because of the change that has been going on in the staff of corn inspectors for many years. Originally the inspectors were specially appointed, but since 1842 the arrangement has been that the places of inspectors dying or retiring, with the

exception of the inspectors in London, Oxford, and Cambridge, are to be filled up by officers of the Inland Revenue Department, who have other duties to perform. It seemed possible, therefore, that this change in the officers performing the duties of corn inspectors might have something to do with the diminution in the quantities returned. Altogether, since 1867, the number of inspectors dying or retiring, and whose duties are now discharged by officers of the Inland Revenue Department, has been twenty, a sensible proportion of the 150 who make returns. The remaining corn inspectors who are not officers of the Inland Revenue are now only seven in number, exclusive of the inspectors of London, Oxford, and Cambridge. In view of these circumstances, the department has endeavoured, by frequent circulars and otherwise, to urge upon the corn inspectors the importance of their duties, and the necessity of making full and accurate returns. The Commissioners of Inland Revenue, at the suggestion of the Board of Trade, have also pressed the matter upon the attention of their officers discharging the duties of corn inspectors.

“It would appear, however, that the suspicion of growing inefficiency in the collection of the returns, as explaining the gradual diminution in the quantity returned, cannot be considered well founded. I find, on inquiring into the matter, that the quantity returned varies with the yield of the crops. If there is a good harvest, a large quantity is sold in the following season; if there is a bad harvest, a smaller quantity is sold. The diminution between 1865 and 1877, though so large, appears, in fact, to correspond to the reduction in the interval in the acreage of wheat grown at home and in the yield of the harvests. The agricultural returns were not commenced in 1865, but they have existed from 1867, and since then the acreage under wheat in England has diminished more than 10 per cent.

“The acreage under wheat in England in each year since 1869, when the returns became fairly satisfactory, has been as follows:—

	Acres.		Acres.
1869	3,417,000	1874	3,391,000
'70	3,248,000	'75	3,129,000
'71	3,313,000	'76	2,823,000
'72	3,337,000	'77	2,987,000
'73	3,253,000	'78	3,041,000

“There can be no doubt, then, of a steady decline in the wheat area, which ought, one year with another, to affect the quantity of home wheat grown and sold.

“With regard to the yield of harvests, it appears, according to Mr. Caird's estimates, that the yield of 1864, which is the most important for the returns of 1865, was above the average as 127 is to 100, and that of 1865 itself was above the average as 110 is to 100. But in 1876, which was the most important for the returns of 1877 (the year of greatest diminution), the yield was below the average as 76 is to 100, and in 1877 it was below the average as 74 is to 100. Comparing the mean of 1864-65 with the mean of 1876-77, the yield in the former period is represented by the figure

118½, and in the latter by 75, the reduction amounting to 37 per cent.

“ This reduction of the wheat area by 10 per cent., and of the yield by 37 per cent., appears to correspond therefore with remarkable closeness to the reduction of quantity returned as sold in the markets, amounting, as we have seen, to 46 per cent. Possibly the reduction in the quantity brought to market ought not to be so great in proportion as the reduction in the harvest itself, but it seems impossible to doubt that these changes do account for the greater part at least of the diminution which has occurred.

“ This belief is confirmed by the improvement which has, in fact, occurred since 1877. In 1878 there was some increase in the quantities returned as compared with the previous year, corresponding apparently to the improved yield of that year. The quantity returned, which was 1,943,000 quarters only in 1877, was 2,141,000 quarters in 1878. The improved yield of 1878 will probably, however, affect the returns of the present year even more than those of 1878, and apparently has already done so. In the first five months of 1879 the quantity returned as sold has been no less than 1,130,000 quarters, as compared with 796,000 quarters in the same period of 1878, and 822,000 quarters in the same period of 1877.

“ Taking all these circumstances into account, I believe it is not possible to ascribe the diminution in the quantity of wheat returned to inefficiency in the collection of the returns, which, as already stated, the Board of Trade endeavour, with the co-operation of the Inland Revenue Department, to make as efficient as possible.

“ 2. The question is expressly raised whether returns as to a quantity of wheat representing only a fifth part of the wheat grown, can be a fair representation of the price for the purposes of the Corn Acts. The reduction in 1864 of the number of towns from which returns are obtained from 290 to 150 has been expressly challenged on the score of its necessarily leading to a less trustworthy result. But, as already stated, the question being one of price only, it would seem possible to obtain a good result from a limited quantity only of sales. Even a smaller quantity than a fifth, if a proper selection of towns and of sales to be recorded were made, might be sufficient for the returns, and might give no different result than if returns were obtained of a third, or a half, or even a greater proportion, of the whole quantity sold. The special doubt suggested as to the returns in forming a basis for the tithe averages seems to be the omission of small markets, where the price, it is alleged, will be lower than in the larger markets; but the list of towns from which returns are obtained does, in fact, include a considerable proportion of small markets from which there is a large aggregate return.

“ All this would be true if the returns were now being commenced for the first time; but it was ascertained in fact, when the change from 290 to 150 towns was made in 1864, that no difference would have been made in the returns for some time previous, if they had been from the 150 towns selected, instead of from the

290. Unless this had been found on inquiry, I should say that the change in a statistical view, and apart altogether from the question of the important monetary issues depending on these returns, would hardly have been defensible. A record like that of the corn returns ought to be kept as far as possible on the same basis throughout, and when a change is made it should only be after ascertaining that the result will continue the same, or because the circumstances have changed, so that a slightly modified basis becomes necessary in order to reach the result really contemplated by the Acts.

"In this latter view the department has had under its consideration the expediency of altering the list of towns from which returns are now obtained, but legislation will be necessary for making any alteration, and it has not been thought expedient to press for legislation on this point only. The only object would be to provide that as business goes away from some markets, other rising markets should be substituted for them, and no changes have occurred since 1864 sufficient, in my opinion, to render imperative an immediate alteration in the selection of towns then made.

"3. Another question raised is as to re-sales being included with sales. For the purposes of the tithe averages, it is alleged that only the sales by the growers should be returned. Whether this would be a proper rule in a new Tithe Act is a matter on which it would be out of place for me here to give an opinion, but in actual fact no such rule has been adopted in the Corn Acts. The direction is explicit that the inspectors are to make returns of all sales.

"Section 25 of 5 Vict., Sess. 2, cap. 14, directs, 'That all persons . . . shall return . . . an account in writing of the amount of each and every parcel of each respective sort of British corn so by them respectively bought.'*

* "It may be useful to quote the full text of the clauses bearing on this point:—Section 23 of 5 Vict., Sess. 2, cap. 14, directs, 'That every person who shall deal in British corn at or within any city or town named in the said schedule hereunto annexed, other than the city of London, or who shall at or within any such city or town engage in or carry on the trade or business of a corn factor, miller, maltster, brewer, or distiller, or who shall be the owner or proprietor, or part owner or proprietor of any stage coaches, waggons, carts, or other carriages carrying goods or passengers for hire to and from any such city or town, and each and every person who as a merchant, clerk, agent, or otherwise, shall purchase at any such city or town any British corn for sale, or for the sale of meal, flour, malt, or bread, made, or to be made thereof, shall, before he or she shall so deal in British corn at any such city or town, or shall engage in or carry on any such trade or business as aforesaid, or shall purchase any British corn for any such purpose as aforesaid, at or within any such city or town, make and deliver in manner hereinafter mentioned, a declaration in the following words (that is to say):

" 'I, A. B., do declare that the returns to be by me made conformably to the Act passed in the fifth year of the reign of Her Majesty Queen Victoria, intituled (here set forth the title of this Act), of the quantities and prices of British corn which henceforward shall by or for me be bought, shall to the best of my knowledge and belief contain the whole quantity, and no more, of the British corn *bonâ fide* bought for or by me within the periods to which such returns respectively shall refer, with the prices of such corn, and the names of the sellers respectively, and to the best of my judgment the said returns shall in all respects be conformable to the provisions of the said Act.'

“ In the Act it is also specially directed as regards London that factors and dealers, as well as farmers, are to return the sales they make; not, as in other towns, the purchases they make. Such returns, if made by factors and dealers, must necessarily be re-sales in the sense contended for by those who make objections on this ground to the corn returns.*

“ ‘ Which declaration shall be in writing, and shall be subscribed with the hand of the person so making the same, and shall by him or her, or by his or her agent, be delivered to the mayor or chief magistrate, or to some justice of the peace for such city or town, or for the county, riding, or division in which the same is situate, who are hereby required to deliver a certificate thereof to the officer of excise acting as inspector of corn returns for such city or town as aforesaid, or to such continuing inspector of corn returns as aforesaid for such city or town (as the case may be), to be by such officer or inspector registered in a book to be by him provided and kept for that purpose.’

“ Section 25 directs, ‘ That all persons who are hereinbefore required to make, and who shall have made, such declaration as aforesaid, shall, and they are hereby required, on the first market day which shall be holden in each and every week, within each and every city or town named in the said schedule hereunto annexed, except the city of London, at or within which they shall respectively deal in corn, or engage in or carry on any such trade or business as aforesaid, or purchase any corn for any such purpose as aforesaid, to return or cause to be returned to the officer of excise acting as inspector of corn returns for such city or town at the place appointed for receiving such returns, or to the continuing inspector of corn returns for such city or town, or to the inspector of corn returns for the city of Oxford or the town of Cambridge (as the case may be) an account in writing, signed with their names respectively, of the amount of each and every parcel of each respective sort of British corn so by them respectively bought during the week ending on and including the day next preceding such first market day as aforesaid, with the price thereof, and by what weight or measure the same was so bought by them, with the names of the sellers of each of the said parcels respectively, with the names of the person or persons, if any, other than the person making such return, for on account of whom the same was so bought and sold; and it shall be lawful for any such officer of excise acting as inspector of corn returns, or any such continuing inspector of corn returns as aforesaid, to deliver to any person making or tendering any such return a notice in writing requiring him or her to declare and set forth where, and by whom and in what manner, any such British corn was delivered to him or her, and every person to whom any such notice shall be so delivered shall, and he or she is hereby required to comply therewith, and to declare and set forth in such his or her return, or in a separate statement in writing, the several particulars aforesaid.’

* “ Section 17 of 5 Vict., Sess. 2, cap. 14, provides, ‘ That every person who shall carry on trade or business in the city of London, or within 5 miles from the Royal Exchange in the said city, as a corn factor, or as an agent employed in the sale of British corn, and every person who shall sell any British corn within the present Corn Exchange in Mark Lane in the said city, or within any other building or place which now is or may hereafter be used within the city of London or within 5 miles from the Royal Exchange in the said city for such and the like purposes for which the said Corn Exchange in Mark Lane hath been and is used, shall, before he or they shall carry on such trade or business, or sell any corn in manner aforesaid, make and deliver to the lord mayor or one of the aldermen of the city of London, a declaration in the following words (that is to say):—

“ I, A.B., do declare that the returns to be by me made conformably to an Act passed in the fifth year of the reign of Her Majesty Queen Victoria, intituled (here set forth the title of this Act), of the quantities and prices of British corn which henceforth shall be by or for me sold or delivered,

“ The original purpose of the Acts, that of regulating the sliding scale of corn duties, would also seem to have required that the re-sales should be included. As the price of corn rose the sliding scale of duties was to fall, and for that purpose a re-sale of corn was obviously just as important as an original sale by the grower to a dealer. The object to be got at was the current price, and at times when the price rose or fell suddenly, when a change in the scale of duties was therefore most probable, the re-sales would probably be very important in regulating the current price. There was, at any rate, no reason for excluding such re-sales in the original purpose of the Corn Acts. That they ought to have been excluded when the price of corn thus obtained became the basis in 1836 of the tithe averages, is a point which does not seem to have been even considered at the time, and which could hardly have been material. In the selection of certain prices obtained from the corn returns as the equivalent of a certain tithe average, it was, of course, practicable to allow for any variation there might be between the average prices the growers of corn obtained for their produce, and the average prices actually returned.

“ In any case I should doubt whether re-sales can have the importance supposed. There cannot be two prices in the same market, and in the same market the re-sales are no doubt at the same price as the other sales of corn of the same quality.

shall to the best of my knowledge and belief contain the whole quantity, and no more, of the corn *bonâ fide* sold and delivered by or for me within the periods to which such returns respectively shall refer, with the prices of such corn, and the names of the buyers respectively, and of the persons for whom such corn shall have been sold by me respectively, and to the best of my judgment the said return shall in all respects be conformable to the provisions of the said Act.’

“ ‘ Which declaration shall be in writing, and shall be subscribed with the hand of the person so making the same, and the lord mayor, or such alderman as aforesaid of the city of London, for the time being, shall, and he is hereby required to, deliver a certificate thereof, under his hand, to the inspector of corn returns for the city of London, to be by him registered in a book to be by him provided and kept for that purpose.’

“ Section 18 directs, ‘ That every such corn factor and other person as aforesaid, who is hereinbefore required to make, and who shall have made, such declaration as aforesaid, shall, and he or she is hereby required to, return or cause to be returned, on Wednesday in each and every week, to the inspector of corn returns for the city of London, an account in writing, signed with his or her own name, or the name of his or her agent duly authorised in that behalf, of the quantities of each respective sort of British corn by him or her sold during the week ending on and including the next preceding Tuesday, with the prices thereof, and the amount of every parcel, with the total quantity and value of each sort of corn, and by what measure or weight the same was sold, and the names of the buyers thereof, and of the persons for and on behalf of whom such corn was sold; and it shall be lawful for any such inspector of corn returns to deliver to any person making or tendering any such returns, a notice in writing, requiring him or her to declare and set forth therein where, and by whom, and in what manner, any such British corn was delivered to the purchaser or purchasers thereof, and every person to whom any such notice shall be so delivered shall, and he or she is hereby required to comply therewith, and to declare and set forth in such his or her return, or in a separate statement in writing, the several particulars aforesaid.’

“Whether it would be desirable now for the sake of the tithe averages to make a change and exclude re-sales, is a different question. Speaking as a statistician, I should be disposed to object to any change if it would have the effect of yielding a different price from what would be obtained on the present basis. The comparison of future years with the past would be thrown out, and the value of the record of corn prices which has now become very great would be impaired.

“In point of fact, I may add, so far as my observation goes, the returns are more apt to be defective in not including re-sales, than in misleading people by including too many. The recent public discussion about re-sales appears to operate on the minds of people in the markets who make returns, and to cause a certain difficulty at times in obtaining compliance with the Acts, though there is nothing to affect the accuracy of the general result.

“4. There is a question again as to whether the returns are not affected in comparison with former years by an increase of the quantity of corn which the farmer consumes in his farm, without bringing it to market. Upon this point there is no official information in the department, as there could hardly be. The inspectors have only to do with the actual sales, and a gradual change in the habits of farmers in bringing corn to market would probably only be noticed by the most observant. Even those who did notice such a change would not be called on in the ordinary course of their business to bring it to the notice of the comptroller of the corn returns. I may say, however, that in all the correspondence which has taken place, the point has not even been mentioned incidentally, nor has it occurred to any inspector as explaining the falling off in the quantity of corn returned to which their attention has been called. The fact that the quantity returned has not fallen off any more than in proportion to the decline in the acreage and yield of wheat, would seem to confirm the opinion that there has been no material diminution in the proportion of the corn grown by them which farmers bring to market.

“The subject has been mentioned frequently in agricultural journals, and at discussions in the chambers of agriculture; but no statement has yet been brought to the notice of the department of the probable increase in any district, or on any particular farm, of the proportion of corn consumed at home and not sold. Some such statements would be required in order to enable the department to judge how far the basis of the returns may have been silently altered during recent years. If any such statement is made to them it will be promptly inquired into.

“5. There is another question as to the effect on the returns of selling by weight instead of by measure, and the confusion of customary measures with imperial measures.

“It has been alleged that in consequence of customary quarters being returned as imperial quarters, and of an improper mode of conversion being employed when corn, which is sold by weight, is returned in quarters, the price in many of the returns is really not that of an imperial quarter, but a larger measure. The corn

averages, it has been stated broadly, are 10 per cent. higher than they ought to be in consequence of this error.

"This complaint has appeared to the department the most serious, as there is an obvious liability to error in the returns from the causes described. It has consequently been made the subject of a special investigation, and advantage has been taken of a recent return obtained of the weights and measures by which corn is sold in different parts of England, to throw light on this subject. The quantities of corn returned from the different places where different weights and measures are used, have been summed up, and the amounts compared, so that an idea can be obtained of the possible limits of the error arising from the causes mentioned. An analysis of the returns in question, with the particulars of the quantities of wheat, barley, and oats sold, according to the different weights and measures, is appended. The results of this analysis and of inquiries to which it led respecting the mode of conversion in the principal places where sales were made by weight or customary quarters, are as follows:—

"The analysis shows that, as regards wheat, more than 700,000 quarters, or a third of the whole sales recorded in 1878, were sold, either by imperial measure alone, or by Winchester and other local measures, which are practically equivalent to imperial measure, leaving 128,000 quarters sold by weight alone, and nearly 1,300,000 quarters sold by measure combined with weight, *i.e.*, usually by quarters made to weigh a certain fixed number of pounds, so that the measure sold will be greater or less according to the heavier or lighter weight of the grain. As regards barley, more than 1,300,000 quarters, or 75 per cent. were sold by imperial measure, and 94,000 quarters by weight only, leaving about 330,000 quarters sold by weight and measure combined. Of oats, 80,000 quarters, or about 44 per cent., were sold by measure; 12,000 quarters by weight only, and 91,000 by weight and measure combined; the total sales of oats only amounting to 184,000 quarters. It is evident then (1) as regards wheat, the liability to error in the way described can only arise upon two-thirds of the returns; (2) as regards barley, upon one-fourth of the returns; and (3) as regards oats, only upon one-half of the returns. If the price returned, therefore, were, in the cases of error, 10 per cent. too high, it would only throw out the price of wheat by two-thirds of 10 per cent., or 7 per cent.; the price of barley by one-quarter of 10 per cent., or $2\frac{1}{2}$ per cent.; and the price of oats by one-half of 10 per cent., or 5 per cent. And as wheat, oats, and barley count equally for the tithe averages, these would only be affected to the extent of the mean of these errors, or 5 per cent.

"It can be shown, however, that the possible error must be much less than this; the customary quarters returned where sales are made by weight and measure combined, being sometimes under, very often nearly equal to, and seldom much over, the usual weight of the imperial quarter, which for wheat, in average years, may be taken at 63 as a maximum, and 60 as a minimum; for barley at 50 pounds as an average, and for oats at 39 pounds as an average.

“As regards wheat, it is found that 200,000 quarters of wheat were sold in the markets where the bushel is calculated to weigh from $58\frac{3}{4}$ pounds to 60 pounds, 310,000 quarters at weights of from 60 pounds to 63 pounds per bushel, 770,000 quarters at bushels of 63 pounds, and 12,000 quarters at bushels of over that amount. Even, therefore, if no trouble had been taken in converting these quarters into imperial quarters, the only serious error that could arise would be upon the 770,000 quarters of wheat sold by quarters of 63 pounds, that is upon one-third of the total quantity, and the amount of the error, assuming 60 pounds to be the average weight of wheat of the present season, would only be 5 per cent. This would only throw out the whole price of wheat by one-third of 5 per cent., or $1\frac{2}{3}$ per cent. Even assuming that there is an error of 5 per cent. upon all the sales in quarters at a rate above 60 pounds per bushel, or 1,080,000 quarters, the effect on the proportion of the tithe fixed by the average price of wheat would be only one-half of 5 per cent., or $2\frac{1}{2}$ per cent.; that is rather less than 1 per cent. on the whole tithe average.

“The limits of possible error may be still farther reduced. From the inquiries above referred to, made of the corn inspectors at the principal markets where sales are reported to be made by bushels of over 60 pounds, it is found that in the case of more than half the corn sold, the dealers who make the returns themselves convert the weight and weighed bushels into imperial measure, so that the possible excess in the price of wheat returned, instead of being $2\frac{1}{2}$ per cent., cannot be more than $1\frac{1}{4}$ per cent., and is probably much less. The whole tithe average must also be affected, at most, to no greater extent than the third of this $1\frac{1}{4}$ per cent.

“With regard to the proportion of the tithe dependent on the price of barley, there is still less possibility of error. Not only is more than 75 per cent. of the total barley returned sold by measure alone, as above stated, but we find from the inspectors that nine-tenths of the remainder are converted into imperial measure before being included in their returns to the inspectors. So that the possible error in converting the small quantity remaining from weight to measure could not affect this proportion of the tithes to any appreciable extent.

“As regards oats, the possibility of error through customary quarters being taken for imperial quarters, it has been seen, can only arise upon little more than half the sales, exactly stated upon 56 per cent. of the sales, the quantity of oats returned sold by measure only being 44 per cent. We must immediately, however, make a further reduction. Of the above 56 per cent., more than one-third, or 52,000 quarters, forming upwards of 25 per cent. of the total sales of oats, are sold by customary quarters, very often largely under the average of 312 pounds, or variously stated as ranging between ‘280 and 336 pounds’ the mean of which is under 312 pounds. Broadly, we may say that the greater part of this item, or 20 per cent. of the total sales of oats, is sold by a customary quarter, which is under and not over the average weight of the imperial quarter. Adding this 20 per cent. to the above 44 per cent., there remains

only 36 per cent. of the total sales of oats on which error may arise through customary quarters weighing more than imperial quarters being taken for imperial quarters. As regards this 36 per cent., the excess of weight above the average quarter appears to range about 10 per cent., so that the limit of error as regards oats, even if no care was taken to convert the customary quarters into imperial quarters, would be 10 per cent. upon one-third of the sales of oats, or $3\frac{1}{3}$ per cent. upon the aggregate price of oats, and rather more than 1 per cent. upon the total tithe average.

"It is found, however, as the result of our inquiries of the corn inspectors, that as regards about one-half of this 36 per cent. the conversion from weight to imperial measure is certainly made by the dealers in returning the sales to the inspectors, so that error in the way described would only be possible on about half the amount, or one-sixth of the total sales of oats, on which an excess of 10 per cent. would be equal to $1\frac{2}{3}$ per cent. on the total price of oats, and about $\frac{1}{2}$ per cent. upon the total tithe average.

"The result is, that assuming error to exist on that balance of sales of wheat, barley, and oats, where it cannot positively be shown that there is an absence of error, the extent of error introduced into the price of corn, and consequently into the tithe average, must be immaterial. In the case of wheat the error cannot exceed $1\frac{1}{4}$ per cent., affecting the tithe average a little over a third of 1 per cent. only; in the case of barley there is no appreciable error, and in the case of oats the error is $1\frac{2}{3}$ per cent. only, affecting the tithe average only about $\frac{1}{2}$ per cent. Altogether the error in the tithe average, even in a year like the present, supposing it to depend only upon the year's prices, would be less than 1 per cent. This department, however, cannot admit that even this slight amount of error does, in fact, exist where its absence cannot be positively shown. The whole result of the inquiry is to prove that a considerable amount of care is bestowed by the corn inspectors upon the returns.

"If the percentages of possible error that I have mentioned are reduced to money, it will be found that the $1\frac{1}{4}$ per cent. excess in the case of wheat would increase each 100*l.* of tithe payment by 8*s.* 4*d.*, and the $1\frac{2}{3}$ per cent. in oats by 11*s.* 1*d.*, and there being nothing to add on account of barley, the total increase in every 100*l.* tithe would be 8*s.* 4*d.* + 11*s.* 1*d.*, or 19*s.* 5*d.*

"Of course, it is quite possible that error may exist in that part of the returns where its absence appears to be positively reported, that in some places where sales are reported to be made by imperial quarters, a customary quarter is really used, and that other errors may exist. The publication of the return of weights and measures above referred to, and of the annexed summary, should, however, enable those interested, and who have local knowledge, to say whether any serious objection in this way can be made to the returns. Although there may be slips here and there, it may be assumed to be most improbable that the corn inspectors, as a rule, have not given a correct description of the weights and measures used in their districts.

"It has also to be considered that, although in a year like the present, through the inattention of the inspectors, error may arise

in stating the prices of wheat, barley, and oats, for the year, to the extent above described, yet this will not be the case on the average of the years forming the septennial period on which the tithe averages are calculated. An error of this sort, therefore, in a particular year, will only affect the tithe average calculated to the extent of one-seventh, and, as the error itself is less than 1 per cent., would be quite inappreciable. Even if the error occurred twice or three times in a septennial period, it would still not exceed the half of 1 per cent. Of course if the error was not compensated, it would, at the end of seven years, by entering seven times into the septennial calculations, affect the tithe average to the full extent of the error of a particular year, but the nature of the error is such, that it would be compensated, in good seasons, when the average weight of the imperial quarter was higher than the average weight of most of the customary quarters. In these years, for the dealers or inspectors to return customary quarters as imperial quarters, would be to return a lower price than they ought, just as it now would have the effect of returning a higher price.

“I have thus endeavoured to state, as fairly as possible, what error can arise on the returns in the way described, and the conclusion clearly is, that the limits of error arising from sales by weight, or by weight and measure combined, not being properly returned in imperial quarters, must be very small indeed. The error, if any, in a season like this, would also be compensated by an opposite error when the seasons are good.

Summary.

“The conclusions of the foregoing memorandum may be summed up as follows:—

“1. The falling off in the quantity of wheat returned as sold in the markets between 1865 and 1877 appears to be fully accounted for by the diminution of the acreage under wheat, and of the yield of the harvest. In 1878, when the wheat harvest was better than in the two previous years, there was an increase of the quantity returned, and this improvement has continued in 1879.

“2. The returns may be fairly a correct representation of the current average price of wheat, although only a fifth part of the wheat grown is returned. To obtain this end, it is sufficient to select impartially the markets from which returns are obtained. In particular, no incorrectness can have arisen through the reduction of the number of markets from 290 to 150 in 1864, as it was ascertained at the time that the results of previous years, from the 150 and from the 290 towns, would have been the same.

“3. The inclusion of re-sales in the returns is not likely to make the result different from what it would be if they were excluded. It is clear by the Acts that they must be included, and the original object of the returns, the regulation of the sliding scale of corn duties, made it necessary to include them. It would be inexpedient now to alter the basis of the returns, as comparison between past and future years might be affected.

“4. There is no evidence of the returns being affected, and of

the price being higher than it would otherwise be in consequence of a larger proportion of corn being consumed by farmers at home than used to be the case.

"5. The maximum error which may arise through sales being made by weight instead of by measure, or by weight and measure combined, and the improper return of such sales is very inconsiderable, apparently less than 1 per cent. upon the whole tithe average of a year like the present; and even the existence of so much error is not proved. It is also an error of a kind that would be compensated in good seasons in consequence of the imperial quarter weighing more than the customary quarters by which sales with weight and measure combined are made.

"In conclusion, I may suggest that the high tithe average of which complaint is made does not appear, in fact, to arise from the sales of wheat having been lately returned at a high price, but from the price of barley remaining much higher than the average fixed in 1836, although wheat has been declining. It may have been a mistake originally to assign an equal value to wheat, barley, and oats in fixing the average, but the necessary effect is, that although wheat is a more important crop than either barley or oats, the latter tell equally on the average. It would be out of place for me, however, to go into questions of this sort, and I merely suggest this point as to the effect of the price of barley on the tithe average, with the view of directing investigation and inquiry by those interested.

(Signed)

"R. GIFFEN.

"*Statistical and Commercial Department,
Board of Trade, 21st June, 1879.*"

APPENDIX.

WHEAT.—*Analysis of Summary of Special Returns from Corn Inspectors, as far as Wheat Sold in Market is concerned.*

Names of Towns.	Quantity of Wheat Returned in each Town for last Year.
<p>TOWNS IN WHICH WHEAT IS SOLD BY MEASURE ONLY.</p> <p><i>By Imperial Quarter, Comb, and Sack—</i></p> <p>Aylesbury, Aylsham, Basingstoke, Beccles, Blandford, Bridport, Bungay, Bury St. Edmunds, Cambridge, Canterbury, Chelmsford, Chichester, Dartford, Diss, Fareham, Frome, Guildford, Harlestone, Havant, Haverfordwest, Launceston, Lewes, London, Louth, Lowestoft, Maidstone, Newport, Newcastle, Portsmouth, Reading, Ringwood, Romford, Rye, Shaftesbury, Sherborne, Southampton, Stowmarket, Sudbury, Uxbridge, Watton, Wareham, Warminster, Windsor, Wolsingham, Woodbridge, Yarmouth</p>	<p>Qrs.</p> <p>573.524</p>

Analysis of Summary of Special Returns of Wheat Sold in Market—Contd.

Names of Towns.	Quantity of Wheat Returned in each Town for last Year.
TOWNS IN WHICH WHEAT IS SOLD BY MEASURE ONLY—Contd.	Qrs.
<i>By Winchester, Appleby, and Carlisle Bushel, Boll, Bag, Load, and Listred—</i>	
Andover, Appleby, Berwick, Cardiff, Carlisle, Colchester, } Dorchester, Hertford, Hexham, Newcastle, Stockton, Tavis- } tock, Whitehaven, Winchester	141,264
TOWNS IN WHICH WHEAT IS SOLD BY WEIGHT ONLY.	
<i>By Stone, Hundredweight, and Cental—</i>	
Beverley, Chester, Denbigh, Exeter, Lincoln, Liverpool, Man- } chester, Totnes, Warrington, Wrexham	128,235
TOWNS IN WHICH WHEAT IS SOLD BY MEASURE AND WEIGHT.	
<i>By Measure, equal to Imperial Quarter of from 470 to 480 lbs.—</i>	
Bodmin, Bristol, Chepstow, Chester, Derby, Fakenham, Hel- } ston, King's Lynn, Middlewich, Nantwich, Newark, Preston, } Redruth, St. Austell, Sleaford, Truro, Wakefield	206,176
<i>By Measure, equal to Imperial Quarter of from 480 to 504 lbs.—</i>	
Aylesbury, Bedford, Birmingham, Bridgewater, Cardiff, Chard, } Cirencester, Coventry, Exeter, Gloucester, Leeds, Mon- } mouth, Northampton, Oxford, Plymouth, Stow-on-the- } Wold, Taunton, Tetbury, Tewkesbury, Ulverstone, Wells, } Worcester, Wrexham	309,447
<i>By Measure, equivalent to Imperial Quarter of 504 lbs.—</i>	
Alnwick, Barnard Castle, Boston, Bridlington, Brigg, Carnar- } von, Darlington, Dereham, Durham, Ely, Gainsborough, } Hadleigh, Holt, Howden, Hull, Huntingdon, Ipswich, } Leicester, Morpeth, Nottingham, New Malton, North } Walsham, Norwich, Royston, Sheffield, Spalding, Stamford, } Sunderland, Thetford, Wisbeach, York	770,736
<i>By Measure, equivalent to Imperial Quarter of from 512 to 600 lbs.; also by Bag and Load—</i>	
Barnstaple, Carmarthen, Cockermouth, Egremont, Kendal, } Kingsbridge, Lancaster, Penrith, Tarporley, Warrington, } Whitby, Wigan	12,457
Total	2,141,839

Note.—In the following markets two denominations of weights and measures are used, and in these cases the names have been entered in both categories, and half the sales credited to each:—

Aylesbury.—Wheat is sold by imperial measure and by bushel weight.

Cardiff.—Wheat is sold by bushel weight and by listred of $2\frac{3}{4}$ bushels.

Chester, Warrington, Exeter, and Wrexham.—Wheat is sold by bushel weight and by cental.

Newcastle.—Wheat is sold by imperial measure and by boll.

BARLEY.—*Analysis of Summary of Special Returns from Corn Inspectors, as far as Barley Sold in Market is concerned.*

Names of Towns.	Quantity of Barley Returned in each Town for last Year.
TOWNS IN WHICH BARLEY IS SOLD BY MEASURE ONLY.	
<i>By Imperial Quarter, Comb, and Sack—</i>	Qrs.
Aylesbury, Aylsham, Basingstoke, Beccles, Bedford, Birmingham, Blandford, Bridgewater, Bridport, Bristol, Bungay, Bury St. Edmunds, Cambridge, Canterbury, Chard, Chelmsford, Chepstow, Chichester, Cirencester, Colchester, Dartford, Dereham, Diss, Dorchester, Exeter, Fakenham, Fareham, Frome, Gloucester, Guildford, Hadleigh, Harlestone, Havant, Haverfordwest, Hertford, Holt, Huntingdon, Ipswich, King's Lynn, Launceston, Lewes, London, Lowestoft, Maidstone, Newcastle, Newport, North Walsham, Norwich, Oxford, Plymouth, Portsmouth, Reading, Ringwood, Romford, Royston, Rye, Shaftesbury, Sherborne, Southampton, Spalding, Stow-on-the-Wold, Stowmarket, Sudbury, Taunton, Tetbury, Tewkesbury, Thetford, Uxbridge, Wareham, Warminster, Wells, Winchester, Windsor, Wolsingham, Woodbridge, Yarmouth	1,271,928
<i>By Winchester and Carlisle Bushel, Boll, and Bag—</i>	
Andover, Appleby, Berwick, Carlisle, Hexham, Kingsbridge, Newcastle, Stockton, Tavistock, Totnes, Whitehaven.....	42,109
TOWNS IN WHICH BARLEY IS SOLD BY WEIGHT ONLY.	
<i>By Stone, Hundredweight, and Cental—</i>	
Beverley, Brig, Denbigh, Exeter, Kendal, Lincoln, Manchester..	93,707
TOWNS IN WHICH BARLEY IS SOLD BY MEASURE AND WEIGHT.	
<i>By Measure, equivalent to Imperial Quarter of from 374 to 448 lbs.—</i>	
Barnstaple, Bodmin, Cardiff, Carmarthen, Carnarvon, Coventry, Derby, Helston, Leicester, Middlewich, Nantwich, Plymouth, Preston, Redruth, St. Austell, Sleaford, Truro, Worcester, Wisbeach, Wrexham	43,206
<i>By Measure, equivalent to Imperial Quarter of 448 lbs.—</i>	
Alnwick, Barnard Castle, Boston, Bridlington, Chester, Cockermouth, Darlington, Denbigh, Durham, Egremont, Ely, Gainsborough, Howden, Hull, Leeds, New Malton, Monmouth, Morpeth, Newark, Newcastle, Northampton, Penrith, Sheffield, Stamford, Sunderland, Ulverstone, Wakefield, Whitby, York.....	265,772
<i>By Measure, equivalent to Imperial Quarter of from 480 to 504 lbs., and by Load—</i>	
Lancaster, Liverpool, Nottingham, Tarporley, Warrington, Watton, Wigan	15,833
Total	1,732,555

Note.—In the following markets two denominations of weights and measures are used, and in these cases the names have been entered in both categories, and half the sales credited to each:—

Exeter.—Barley is sold by imperial measure and by cental.

Newcastle.—Barley is sold by imperial measure and by boll.

Plymouth.—Barley is sold by imperial measure and by weight of bushel.

OATS.—*Analysis of Summary of Special Returns from Corn Inspectors, as far as Oats Sold in Market are concerned.*

Names of Towns.	Quantity of Oats Returned in each Town for last Year.
TOWNS IN WHICH OATS ARE SOLD BY MEASURE ONLY.	
<i>By Imperial Quarter, Comb, and Sack—</i>	Qrs.
Appleby, Aylesbury, Aylsham, Barnard Castle, Basingstoke, Beccles, Bedford, Blandford, Bridport, Bungay, Bury St. Edmunds, Cambridge, Canterbury, Cardigan, Chard, Chelmsford, Chichester, Cirencester, Colechester, Darlington, Dartford, Dereham, Diss, Dorchester, Fakenham, Frome, Fareham, Guildford, Hadleigh, Harlestone, Havant, Haverfordwest, Hertford, Holt, Ipswich, Launceston, Lewes, London, Louth, Lowestoft, Maidstone, North Walsham, Newcastle, Newport, Oxford, Portsmouth, Reading, Ringwood, Romford, Royston, Rye, Shaftesbury, Sherborne, Southampton, Spalding, Stow-in-the-Wold, Stowmarket, Sudbury, Tavistock, Tetbury, Uxbridge, Wareham, Warminster, Watton, Winchester, Windsor, Wolsingham, Woodbridge, Yarmouth	69,463
<i>By Winchester and Carlisle Bushel, and by Boll—</i>	
Andover, Berwick, Carlisle, Hexham, Kingsbridge, Stockton-on-Tees, Whitehaven	10,367
TOWNS IN WHICH OATS ARE SOLD BY WEIGHT ONLY.	
<i>By Stone, Hundredweight, and Cental—</i>	
Beverley, Denbigh, Exeter, Kendal, Lincoln, Manchester, New Malton, Thetford, Totnes, Warrington, Wrexham.....	12,023
TOWNS IN WHICH OATS ARE SOLD BY MEASURE AND WEIGHT.	
<i>By Measure, equivalent to Imperial Quarter of from 280 to 336 lbs.—</i>	
Barnstaple, Birmingham, Bodmin, Boston, Bridgewater, Bridlington, Bristol, Cardiff, Carnarvon, Carmarthen, Chepstow, Exeter, Gloucester, Helston, King's Lynn, Middlewich, Monmouth, Nantwich, Northampton, Plymouth, Redruth, St. Austell, Taunton, Tewkesbury, Truro, Wells, Wisbeach, Worcester, York	52,267
<i>By Measure, equivalent to Imperial Quarter of 336 lbs.—</i>	
Brigg, Cockermouth, Derby, Durham, Egremont, Ely, Gainsborough, Howden, Hull, Huntingdon, Leeds, Morpeth, Norwich, Newark, Sheffield, Stamford, Sunderland, Wakefield, Whitby	19,073
<i>By Measure, equivalent to Imperial Quarter of from 336 to 368 lbs.—</i>	
Chester, Coventry, Leicester, Liverpool, Penrith, Preston, Sleaford, Tarporley, Warrington, Wigan, Wrexham	14,994
<i>By Measure, equivalent to Imperial Quarter of from 448 to 504 lbs., and by Load—</i>	
Alnwick, Lancaster, Nottingham, Ulverstone	5,787
Total	183,974

Note.—In the following markets two denominations of weights and measures are used, and in these cases the names have been entered in both categories, and half the sales credited to each :—

Exeter, Warrington, and Wrexham.—Oats are sold by bushel weight and by cental.

II.—*Miscellaneous Statistics of the United Kingdom.*

THE following report by Mr. Giffen to the Board of Trade is prefixed to the new issue Part X of the *Miscellaneous Statistics of the United Kingdom* :—

“In finally completing the tenth issue of the *Miscellaneous Statistics of the United Kingdom*, I wish to take the opportunity of explaining the place held by this publication, both among the various issues of this department and as part of the general statistical compilations of the United Kingdom. The utility of this work and of others appears to be in a great measure lost, from the ignorance which prevails respecting their place in the general scheme of national statistics.

“The *Miscellaneous Statistics* are, in fact, a subdivision of the general statistics of the United Kingdom and the empire, the remaining parts consisting of the annual statements of trade and navigation issued by this department, and the statistical tables relating to the colonial and other possessions of the United Kingdom, with the exception of India, which are the subject of separate publications by the India Office. The whole empire, except India, is described statistically in these four volumes. Formerly the series comprised an additional volume, relating to the statistics of foreign countries, but this has been abandoned for nearly ten years. The various *abstracts* issued by this department—the *Statistical Abstract of the United Kingdom*, the *Statistical Abstract of the Colonies*, and the *Statistical Abstract Relating to Foreign Countries*—also contain a view of the whole statistics of the empire; but they belong to a different series, contain mainly a selection of principal figures, and exhibit a comparison for a period of fifteen years in almost all the tables. The series to which the *Miscellaneous Statistics* belong gives a fuller view of the annual statistics of the empire, and makes up, in fact, however imperfectly, a digest of national statistics, such as members of parliament and the public often desiderate, not knowing that an attempt is made to supply the want.

“A good deal of the misapprehension appears to have arisen from the gradual splitting-up of the annual digest of statistics which this department was originally established to furnish, and from the competition of the abstracts themselves, which were of subsequent creation, and have become extremely popular and useful, though they do not enter into so much detail. In other ways also the *Miscellaneous Statistics* have been suffered to fall into the background more than it was desirable they should do. The history seems to have been this:—In 1832 Mr. Porter was entrusted by the Board of Trade ‘with the important duty of organising and conducting an office for obtaining and arranging statistical returns, in order to exhibit, in a systematic form, statements bearing upon the condition of various interests of the British Empire’* and

* “ See preface to tables of the revenue, population, commerce, &c., of the United Kingdom, Part I, from 1820 to 1831, both inclusive. London, 1833.

he commenced his labours by publishing a digest called *Tables of the Revenue, Population, Commerce, &c., of the United Kingdom*, embracing the period from 1820 to 1831. This volume contained colonial as well as home statistics, and was succeeded by a similar annual publication for each year down to 1852, with the addition of a ten years' digest for the years 1831-40, and another for 1841-50, and of supplementary volumes at irregular intervals, containing statistical tables relating both to the colonies and foreign countries. The first digest contained statistics of foreign trade and shipping, as well as of revenue, population, and other matters, and were the only annual statements of trade and navigation, at all pretending to completeness published at that time and down to 1852. In the latter year a great change occurred. It was decided to subdivide the tables of revenue, population, commerce, &c., and to publish separately an annual statement of trade and navigation, comprising all the statistics relating to foreign trade hitherto published in the tables of revenue, but in a revised and enlarged form; and also to publish separately a volume of colonial statistics, a volume of foreign statistics, and a volume called *Miscellaneous Statistics* to include all the home statistics except those comprised in the annual statement of trade and navigation. The reason of all this is fully explained in the preface to the *Annual Statement of Trade for 1853*, a copy of which is contained in an appendix to this volume. The effect, however, was that the *Miscellaneous Statistics* fell into the background, the more so that the abstracts which were commenced in 1854 were found to compete with them. Their place as part of a single digest of the whole national statistics was also farther obscured by a division of the annual statement of trade and navigation into two parts, one for trade only and another for shipping, which took place in 1871, and by the simultaneous arrangement then made for publishing the *Miscellaneous, Colonial, and Foreign* statistics triennially instead of annually. In this way the original purpose of the *Miscellaneous Statistics* has been well-nigh forgotten by all, except a few statisticians. The statement that in the publications named—the *Annual Statements of Trade and Navigation*, the *Statistical Tables Relating to the Colonies*, and the *Miscellaneous Statistics*—will be found what is professedly a digest of the whole statistics of the empire, excepting India, will probably strike many with surprise, there being no suspicion that such a digest exists.

“It must be one result of this inattention that the *Miscellaneous Statistics* are now less complete than they would otherwise have been. Instead of falling into the background as the volume has done, no statistical publication deserved more attention and criticism. The neglect is the more remarkable because the *Miscellaneous Statistics* are far from being a mere compilation and digest. As Mr. Porter remarked in his first preface, this office was established in order to ‘obtain’ statistical returns, and the volume of *Miscellaneous Statistics* is largely the fruit of this department's labours in obtaining returns. Not to speak of the gradual improvement of the tables supplied by other departments, which is partly due to our efforts, the volume of *Miscellaneous Statistics* contains

many statistics of prices, wages, bank returns, and other matters not to be found in any other official record, and which this department procures with considerable labour. Imperfect as it is, then, there is no doubt the volume, even as it stands, would be more used if it were better known. As a digest of masses of statistics contained in innumerable volumes it should save much labour to the political student, and it is something more than a digest.

"It has not been customary to introduce many changes into this publication from year to year, which would tend to make it inconvenient for reference, and I have specially avoided any thorough revisal while the Committee on Statistics, appointed by the Treasury, is sitting; but one or two additions of a minor kind have been made to the present issue:

"1. In the digest of the educational statistics I have procured, with your sanction, and added some statistics of the higher education throughout the United Kingdom. The authorities at the respective universities have been communicated with, and have generally been most courteous in giving information. The results will be found at p. 44 *et seq.* It need hardly be said that if any comparison is made between different universities based on these figures, it would be necessary to consider their different circumstances, and the different values attached in each to matriculation and to degrees.

"These statistics as to higher education are also only presented as a beginning of statistical tables on the subject. It would be most desirable if those interested would look at the tables, and make suggestions for farther improvement. The tables should also be supplemented by statistics as to intermediate education, which are now most defective.

"2. In addition to the digest of the usual annual statistics, a digest of the various special returns relating to owners of land, which were presented to parliament in 1874, 1875, and 1876, will be found at p. 430 *et seq.*

"3. Special attention has been given in the present volume to the returns of wages from the various manufacturing districts (see p. 394 *et seq.*). With the help of the Chambers of Commerce in the principal towns, and frequently of the principal manufacturers in different trades, an attempt has been made to state not only the bare weekly or daily rates of wages in the different employments, but also the length of day or week for which the wages are paid, and the proportion per cent. of each class at a different rate of wage to the whole number employed in a given manufacture. It is hoped that by means of these particulars a more definite meaning has been given to the so-called rates of wages than if all the different classes of wage-receivers were specified without anything to indicate their relative numbers, or if there were no description of the length of day or week. I have specially to call attention to the fulness of the returns relating to wages in the building trades in the various districts throughout the country.

"This volume is brought out after the lapse of two-and-a-half years from the former issue, so that there has been some acceleration of the date of publication. It is still to be regretted, however,

that so long a time passes after the close of the years to which the *Miscellaneous Statistics* relate before they are published. The matter is entirely out of the hands of this department, the delay arising through the previous delay in publishing many parts of the original statistics which are here digested. It will be impossible to make any annual digest of statistics so complete and useful as it ought to be without a general acceleration of the publication of the annual statistics of the United Kingdom.

“On account of the great interest in the subject, and the frequent applications made to this department for copies of them, I have thought it of interest to add in an appendix copies of the prefaces by Mr. Porter to the volumes of statistics published by him in 1833, and of the prefaces of Mr. Fonblanque to the *Annual Statement of Trade and Navigation*, and the *Miscellaneous, Colonial, and Foreign Statistics* in 1853, when the tables of the revenue, population, commerce, &c., were divided.”

III.—*Notes on Economical and Statistical Works.*

Entwicklung der Gesetze des menschlichen Verkehrs und der daraus fließenden Regeln für menschlichen Handeln. Von Hermann Heinrich Gossen, 1854.

In the preface to the last edition of Professor Jevons's *Theory of Political Economy*, the author gives a brief account of a work on the theory of that science, by a German writer, Hermann Heinrich Gossen, who has, to a large extent, in Professor Jevons's opinion, anticipated him, though without his knowledge, in the application of mathematics to economical research. Gossen's work is certainly a very remarkable one, and the complete oblivion into which it has fallen is even more so. It is very difficult to obtain a copy of this work, even in Germany, and as the Society is not at present in possession of one, it may be useful to lay before members some extracts taken from its pages. Gossen's name is entirely unknown, except as the author of this book, the title of which may be rendered in English, *The Development of the Laws of Human Commerce and of the Rules of Human Action which follow from them.* Gossen, it may be remarked, dates his preface from Cologne, and the work was published in Brunswick. He had apparently been a Government servant, since he describes himself as, “Königlich preussischem Regierungs-Assessor ausser Dienst.” It is therefore possible that something more may be learnt, by application to the Prussian authorities, concerning him. As Professor Jevons observes, “the tone of his remarks here and there seems to indicate that he was a disappointed, if not an injured man.” He was evidently a man of considerable education, and of large acquaintance with the actual facts of commerce, but his work itself might be taken to prove that he was by no means an adept in literature, and that this was his first venture. It has no index, nor even a table of contents, and it is not divided into chapters. These are serious defects in a work of a

scientific character, and they almost account for the small notice taken of the book when it was published, and the almost entire oblivion into which it has fallen since. We propose to give some extracts from it, quoting a large part of the preface and introductory part almost *verbatim*, and also the terms of the propositions in which Gossen states his chief conclusions. We do not give any of the mathematical reasoning, because, in the first place, it would be very difficult to follow it without the diagrams, and next, because the nature and characteristics of the method employed will be far more easily learnt from Professor Jevons's book. Our translation is intended to present to the reader the full meaning of our author, and literary form has, therefore, been sacrificed to accuracy in many cases, and where amplification seemed desirable in the interests of clearness, we have not hesitated to employ it.

Preface to Gossen's Work.

"In the following pages I give to the judgment of the public the results of twenty years' thought. What Copernicus succeeded in effecting for the explanation of the association of the planets in space, that I believe I have effected for the explanation of the associated life of man on the surface of the earth. I believe that I have been able to discover the force (and, in general outline, the laws of its action) which renders the associated life of man possible, and which causes the progress of the human race to continue. And just as the discoveries of one man made it possible to determine the paths of the heavenly bodies during an infinity of time, so, I believe, am I, in consequence of my discovery, in a position to point out to men, with infallible certainty, the way in which they must act in order to attain the end of their lives in the most perfect manner.

"If I have not deceived myself in this belief, the fact will be shown by this, that my initiation of this new path will, like the discovery of Copernicus, be found to possess the power of convincing men of its correctness. May it soon, if thus confirmed, obtain a Kepler and a Newton, who will determine with further precision the laws of the action of the force which sways the actions of mankind.

"With regard to the form of the investigation, its mathematical nature will undoubtedly arouse the opposition of the majority of those who are disposed to busy themselves with politico-economic questions. For mathematical knowledge is, unfortunately, by no means regarded at present as a necessary part of education. In order to justify this form, however, it is sufficient to remark, that in political economy we have to do with the joint action of various forces, and that it is impossible to determine the resultant of the joint action of forces without calculation. It is therefore just as impossible to make progress in true Political Economy without the help of mathematics, as it was in the case of the formerly unknown facts of true astronomy, true physics, true mechanics, &c.; and it may have not a little contributed to the confusion in which political economy finds itself, that, until now, it has not succeeded in discovering the mathematical form which suits it. With reference to

this, namely, that a mathematical treatment is not by any means a usual practice, it has been my endeavour only to assume as known that part of mathematics which is taught in schools. Only on a few occasions would it be necessary to determine maxima and minima, and in those cases it would be necessary to call to our aid a portion of mathematics which oversteps this limit. This, however, has no effect on the comprehensibility of the reasonings, for it is wholly inapparent to the reader whether he carefully follows out the calculation of this maximum or minimum, since care is taken that the nature of the maximum in reference to the minimum shall in the particular case be made clear in other ways. I am therefore of opinion that, for those who seriously desire to test my deductions, the mathematical basis will be no real obstacle. In order to make the comprehension of my reasoning still more easy, I have practically applied each theoretic deduction in an imaginary example by means of numerical tables. It will thus be easy for those who have no desire to follow out the theoretical reasoning, to make themselves acquainted with the results, and so weigh the conclusions drawn from them. The testing of the calculations may, however, be omitted with less hesitation, since it is well known that in mathematical investigations the correctness of the results may be easily vouched for, if the assumptions from which we start are recognised as sound, and the testing of these assumptions is possible without any mathematical knowledge. On the deductions themselves I have to remark that most of them are to be regarded more as tentative sketches than as the completed products of my labour."

Having thus given his own view of his historical position as an economist, and defended his use of mathematics, which he apparently supposes to be wholly new, Gossen proceeds to set forth in the following manner the principles on which he bases his theory of economics. It will be observed that he begins with a psychological investigation, namely, an inquiry into the nature of the phenomenon of pleasure considered as a continuous emotional state, and he assumes, as a matter of common experience, that any given pleasure tends to diminish in magnitude when repeated, according to a definite law. His first principle is therefore established inductively.

Introductory Portion of Gossen's Work.

"Man desires to enjoy his life, and places the end of his life in the raising of his life's enjoyment to the maximum. But, on the one hand, the life of man lasts a considerable time, and there are a number of pleasures which man can exhaust in a moment, but which impose on him in their consequences privations which are out of all proportion to the enjoyment he has received from them. On the other hand, the highest and purest pleasures are first perceptible to man, they first appear to him as enjoyments, when he has been educated up to appreciating them. A man who should think that he would most perfectly attain the end of his life if he were every instant to exhaust himself on the pleasure which at the

instant appeared greatest, without thinking of the remainder of his life's enjoyment, would deceive himself sorely. In order to find the true magnitude of any given pleasure, we must keep in mind not merely the enjoyment of the moment, but also the fact that all the renunciations which the actual enjoyment will cause to us during the rest of our lives must be deducted. It must be considered how far an enjoyment is likely to hinder our attaining the bodily as well as spiritual culture, which makes men fit for the higher and finer enjoyments. In other words—

“Enjoyment must be so directed that the sum of the enjoyments of the whole of life may be a maximum.”

“On this basis we see all men act without exception, from the cradle to the grave—the king and the beggar, the frivolous *viveur* and the penitent monk; and if the ways of men as we observe them are so enormously various, this merely arises from the variety of views taken on the magnitude of different pleasures, a magnitude which undoubtedly also varies for different persons according to the degree of culture attained by them, and on the magnitude of the hindrance which any given pleasure will place in the way of future pleasures; in this respect, that everyone desires to bring his enjoyment to a maximum, all are alike. Even the ascetic, who is apparently most removed from this desire, in that he seeks to obtain the Kingdom of Heaven, acts with the same end in view.

From the recognition of this end of life there follows this rule for the acts of man: *Man should so regulate his actions that the sum of his life's pleasure should be a maximum.*

“Having laid down this basis, we must next investigate the laws according to which the power of feeling pleasure works.

“On carefully considering in what way enjoyment takes place, we find that the following are the common characteristics of all pleasures.

“I. The magnitude of one and the same pleasure decreases continually, if we proceed uninterruptedly with its production, until at length satiety is arrived at.

“II. A similar decrease in the magnitude of a pleasure occurs when we recur to a pleasure that we have had before; and not merely in this way, that, by repeated production of a pleasure the same decrease occurs, but the magnitude of the pleasure is less at each new commencement, and the length of time during which any pleasure is felt as such, becomes less at each repetition; satiety comes sooner, and both the pleasure at the commencement and the time of duration are decreased more rapidly the more frequently the pleasure is repeated.

“Our daily life affords thousands of examples of these facts . . . We must not confuse with this lessening of pleasure in the case of a long continued and oft repeated enjoyment of one and the same object, the increase which it is possible to attain in the capacity for a particular class of pleasures, *as a whole*, by means of cultivation. The cultivation of sight, hearing, taste, and intelligence raises our enjoyment of the objects which serve these senses, but the continued and repeated enjoyment of *the same object* is none the less subject to a diminution of pleasure.”

We need not go further into Gossen's analysis of consequences of his first principle. But we may here give a brief account of his mode of employing geometrical illustrations. Since pleasure diminishes in the way above described, its conditions may, he held, be represented by a straight line cutting a system of two co-ordinates, and making an acute angle with the axis of X at a point situated on the right hand, or positive side of the origin. He admits that the *form* of the line representing a pleasure will not always be a straight line. After describing the nature of the diagrams and the mode of constructing them, he gives four diagrams showing four kinds of lines: (1) Straight; (2) Curved, with the origin outside the curve; (3) Curved, with the origin inside the curve; (4) Undulating. He then remarks that one or another of these should be used according to the nature of the particular observation, and that no general rule can be settled beforehand. He therefore adopts the straight line, since "it fulfils the one condition which we have as yet discovered to be necessary, namely, the representing of the continuous decrease in the magnitude of a pleasure."

The objection to this, of course, is that the form of the Pleasure Line is never an equation of the first degree, and we may refer our readers to Professor Jevons's work (p. 40 and onwards), for a sound exposition of this theorem, which involves the use of the differential calculus. But Gossen enormously simplifies his work by this assumption, that the Line of Pleasure is a straight line, and for the mere purpose of familiarising the mind with the required conceptions, his diagrams are fairly satisfactory. The numerical examples, however, based on these rectilinear diagrams, are fallacious and useless.

We shall conclude by quoting one or two of Gossen's conceptions, which belong strictly to the department of economic thought. His definition of the object of Economics is identical with that of Professor Jevons, viz., "to maximise pleasure," and his definition of *Werth* is identical with that given by Professor Jevons of *Utility*: "The objects of the external world have utility (*Werth*) for us, which utility rises or falls according to the assistance they lend us in attaining the end of our lives" [*i.e.*, the maximum of enjoyment]. He divides the objects of the external world into three classes:—

First, those naturally possessing qualities which are a source of pleasure to man.

Second, those which are only subsidiary sources of pleasure, not having pleasure-giving qualities in themselves. He instances, among other examples, a tobacco pipe, which has no utility apart from tobacco.

Third, those objects which possess no qualities productive of pleasure, but which are instrumental in obtaining objects that have such qualities, such as tools of all sorts, railways, &c.

Having defined utility, and described sufficiently those objects which possess it, *i.e.*, useful objects, Gossen passes on to the consideration of the questions raised by the fact that useful objects differ much as to the ease or difficulty with which they may be obtained. In all but the very rarest cases, he remarks, useful objects can only be obtained by the exertion of energy. Now,

"the exertion of energy demands from men more or less of discomfort (*Beschwerde*), and the utility resulting from an exertion of energy is necessarily reduced in proportion to the amount of discomfort involved in it." This principle Gossen illustrates by a diagram, in which the lines representing the discomfort due to the exertion of energy and the pleasure arising from the objects produced by it are on opposite sides of the axis of *X*, and intersect at a point to the right of the axis of *Y*. The amount of discomfort produced in a given time is to be treated as *negative utility* (or "disutility," as Professor Jevons calls it), and deducted from the utility produced in the same time in order to obtain the amount of net utility, the net gain on the operation. Gossen then remarks, that often, in fact generally, at the commencement an expenditure of energy is pleasant.

Having thus elaborated his theory of *Werth* or utility, Gossen proceeds to define labour, as follows:—"The deliberate expending of energy in order to produce some *useful*, *i.e.*, pleasure-causing object, we call 'labour,' whether the process of expending energy is in itself productive of pleasure or pain. Hence it follows that we are able to increase the sum of our enjoyments so long as the pleasure caused by the objects produced by our labour is greater than the pain caused by the discomfort which is inseparable from our labour."

We have quoted enough to show the remarkable similarity between the method of Gossen and the economic conceptions to which it led him, and the method of Professor Jevons. The errors in Gossen's work, which arose largely from assuming in the phenomena a simplicity which does not exist, are quite unimportant in comparison with the fact of this coincidence of his method with those of other less incautious writers. "The fact," says Professor Jevons, "that four or more independent writers such as Dupuit, Gossen, Walras, and myself, should in such different ways have reached substantially the same views of the fundamental ideas of economic science, cannot but lend great probability, not to say approximate certainty, to those views." We may remark that as regards Gossen and Professor Jevons, the ways in which they have arrived at their fundamental ideas are singularly alike. Gossen, however, was hampered by his dread of employing mathematics too freely in the then state of public opinion. Had he been a little more bold, and had he also arranged his book with some regard to literary propriety, had he divided it into chapters instead of leaving it as an eminently nutritious but exceedingly solid mass of "intellectual pemmican," Gossen would very probably have sooner obtained the recognition which is his due.

From the point of view of this Society, the establishment of economics on a mathematical basis, is of the highest interest. When it is once recognised by those competent to express an opinion, that the study of economics is a study of the relations of the quantities representing certain social phenomena, the scientific position of the much vilified and scorned statistical method is assured. For it can be shown that the statistical method is the only one by which we can become cognisant of the quantities in question, and

that it bears a similar relation to Economics, and indeed to Sociology generally, as Spectrum Analysis does to Physical Astronomy.

Annuaire des Finances Russes. Par A. Vessélovsky, Secrétaire du Comité Scientifique du Ministère des Finances. Huitième année, 1879.

The excellence of the work done in the statistical bureaux of Russia is well known. Working on materials of a very imperfect character, and which, even when satisfactory as to quality, are often not completed without long delays, M. Vessélovsky and his able colleagues deserve great credit for the high character of the publications that are prepared under their supervision. M. Vessélovsky in particular has shown himself indefatigable in the task of introducing a good system of statistical work into the finances of the Czar's empire. The present number of the *Annuaire*, giving the figures for 1877, has appeared fully six months earlier than the usual time, its author having taken measures to accelerate the issue of that portion of the materials which has hitherto caused the delay. As it now stands, the *Annuaire* contains the "règlement définitif" of the budget of 1877, that is, the details of the actual expenditure and receipts of that year, as well as a statement of the amount and general position of the national debt of Russia on 1st January, 1877. Next we have the estimates for the budget of 1879; then the receipts from taxation in 1877, given in full detail, and a full account of the operations of the Bank of Russia in 1877 and 1878. The rest of the volume is devoted to general statistics, which are supplied in some cases for several years, and to an account of recent financial legislation, the text of the edicts in which the various laws were promulgated being given. This latter is a new feature in the *Annuaire*, as are also the elaborate statistics of coinage since 1800, and of emigration and immigration from 1857 to 1877. There is nothing to remark here on the budget of 1877, except that it was a war budget, and that it showed a large deficit, as might be expected. The "ordinary" expenses amounted to 585 millions of roubles or 36 millions in excess of the receipts. The "extraordinary" expenses entailed by the war amounted to 429 millions. Of the credits opened for the exceptional purposes of the war, about 19 millions remained unexpended, and have since been annulled. With regard to the tables of immigration and emigration given by M. Vessélovsky, we in the last number of this *Journal* gave a translation of a *résumé* of their results, taken from the *Journal de St. Pétersbourg* of $\frac{1}{2}$ ⁴/₆th December, 1878, the figures having already appeared in the *Compte rendu du Commerce Extérieur*. The statistics supplied concerning the operations of the Mint of St. Petersburg from 1800 to 1878 are the first that have been prepared on this subject since the appearance of the work of M. Tchistiakow in 1844. In 1851 MM. Tchevkine and Ozersky gave some figures relative to the amounts of the precious metals used for coinage purposes, but only incidentally to their main object, which was confined to inquiring into the production of the mines of Russia. Similar rough estimates of the amounts coined have been included in the annual reports of the administration of

mines, but even these have ceased to appear since 1873. The tables now published by M. Vessélovsky therefore supply a want that has hitherto been very inadequately satisfied. They include the whole of the issues of platinum, gold, and silver coins that have been made in Russia during the last seventy-eight years, with the exception of certain special coinages, such as those struck in Finland, in Warsaw (up to 1867) and in Tiflis (from 1805 to 1832). The total amount issued during this period is about $1,242\frac{1}{4}$ millions of roubles. Of this fully two-thirds is in gold. The coinage of gold commenced in 1802. The amounts of this metal coined annually vary considerably. From 1802 to 1846 the increase, excluding certain exceptional years, was steady, and from 1846 till 1870 the coinage was never much above or below 20 millions, except in 1862 and 1863, when it rose to 32 and 36 millions respectively. In 1871 only 4,600,000 roubles of gold was coined, after which the quantity again increased. The amount coined in 1878 was $34\frac{1}{2}$ millions. The annual coinage of silver has also varied considerably, but as silver has been in use in Russia for a long time, the increase on the amount coined in 1800 has not been great till within the last few years. In 1877 and 1878 the amounts were 10 and $10\frac{1}{4}$ millions of roubles, and these are less than those of 1817 and 1818, which were respectively $13\frac{1}{2}$ and 19 millions. In 1828 the Russian Government commenced to issue platinum coins, and about $4\frac{1}{4}$ million roubles of these were struck between that date and 1845, when the coinage was discontinued. It is rather curious that in the two years 1839 and 1840 the value of platinum coins issued was only 63 roubles, though both previously and subsequently considerable amounts were annually struck; the value of platinum issue in 1844, or only two years previous to the cessation of the platinum coinage, being 643,584 roubles, a sum much in excess of that of any other year.

Essai de Statistique Générale de l'Égypte. Années 1873-77. Premier volume. Le Caire, 1879.

This work is intended to form, when it is completed, as full a statistical account of Egypt as the condition of that country admits of. At present the returns which are at the disposal of M. Amici, the head of the statistical office, are in many cases meagre, and in most cases in a form different from that generally adopted in Europe. Very good progress, however, has been made towards the introduction of a better state of things, and in a few years a thorough organisation of the statistical department will have been effected. The present volume of Egyptian statistics is divided into six chapters, dealing with, (1) Population (part first); (2) Immigration and Emigration; (3) External Commerce; (4) Navigation (foreign and coastwise); (5) Posts; (6) Agriculture (part first). The second volume will contain the remainder of those chapters which are not yet completed, as well as the statistics of public instruction, of public works, of railways, of telegraphs, of justice, and of other smaller matters. The information given does not, except in one or two cases, when the fact is specified, include accounts of the newly-annexed provinces of Souakin and Massawah. M. Amici finds that he is able definitively to establish the fact that the population of Egypt is increasing, and at a faster rate than that

of some other nations. The rate is 0·92 per cent., and if this percentage is erroneous, it errs rather in defect than excess, for the deaths are, and have been for some time, reported with tolerable regularity, while the system of registration of births is in a very unsatisfactory condition. It may be observed that the figures showing the proportion of male to female births, make that proportion a high one, viz., 111 to 100 in 1875, and 110 to 100 in 1876. This fact is somewhat suspicious, for in most countries the ratio is from 104 to 106 per cent. The only country besides Egypt which has a figure differing much from what may be called the normal rate, is Roumania. The infant mortality of Egypt is very high, 55·5 per cent. of the deaths being those of children from 1 to 5 years old. The information contained in the tables of commerce and navigation does not call for any special remark. The account of the postal arrangements will be found interesting; they include the statistics of the provinces of Souakin and Massawah. From Suez to Facher, the most distant postal centres of the new dominions of the Egyptian Government, is 1,915 miles, and the transit occupies about a month. The statistics of agriculture given in this volume include those of the extent of the cultivable land, its division into Ouchouri and Kharadgi land, the proportions cultivated at different periods of the year with reference to the rising of the Nile, the number of animals and the number of date trees in existence in Egypt. These two latter points are illustrated by cartograms, in which the number of horses, sheep, or other animals, and of date trees per feddan in a given district, is expressed by colouring the portion of the surface of the map representing the district with a particular tint.

The Appendix to the Report from the Select Committee on Wine Duties contains some very interesting statistical information. In particular we may notice the paper, No. 2, of those put in by Mr. Seldon, of the Customs Department, showing the "number of gallons of wine on which duty was paid in the United Kingdom, in each of the five years preceding, and in each quinquennial period following the adoption of the alcoholic test, distinguishing the quantities from Portugal, Spain, Italy, France, other foreign countries, and from Australia and other British possessions, showing also the rates leviable and the amount of duty received thereon." The table shows how considerable the increase in the imports of the wines of France, Spain, and Portugal has been. Even taking the total of the quinquennial period 1861-65, the prosperous half of a trade cycle, and comparing it with that of 1866-70, a period of depression, an increase of imports from all three countries occurred. In the case of France and Spain the increase is very large, being nearly 100 per cent. in the case of the former, and about 35 per cent. in that of the latter country. The Spanish wines are imported in considerably greater quantities than the products of the other two nations. Table 3 shows "the quantities of foreign wine on which duty was paid in the United Kingdom from the year 1871 to 1878 inclusive, showing also the tariff classification under which the rates of duty were levied, and the amount of duty received thereon." A glance at the table shows that almost the whole of

the Spanish and Portuguese wines are rated as liable to the 2s. 6d. duty, whilst almost all the French are of sufficiently small alcoholic strength to be admitted at the 1s. duty. Mr. Keene, the head of the laboratory department of the Customs, handed in a paper to the committee, containing a full report to the Commissioners of the Customs regarding the results obtained in testing the wines exhibited in the Exhibition of 1874. Many interesting facts come out in this report, in particular the greater number and variety of the samples of Spanish and Portuguese wines. Mr. Keene's reports on the wines exhibited in 1862 and 1873 are also given. Mr. Schwanlu supplied the committee with a table "showing the duties levied on cotton goods imported into Spain from countries enjoying 'most favoured nation' treatment, compared with the duty imposed on goods imported from England." Mr. G. Menzies put in a paper showing "the unequal taxation on alcoholic drinks in England, Scotland, and Ireland." From this table it appears the duty paid on proof alcohol in Ireland was 6s. 7 $\frac{1}{4}$ d., in Scotland 7s. 1 $\frac{3}{4}$ d., and in England only 3s. 10d., the comparison however being of course imperfect, as it is possible for a considerable quantity of spirit to pay duty in one country and be consumed in another. Colonel Romilly, the deputy chairman of the Customs, handed in to the committee several papers, among the rest an estimate of the number of proof gallons of spirit consumed in the year 1877-78 in the United Kingdom, and another showing the receipts from the wine duties for each year from 1845 to 1878 inclusive.

European and United States Tariffs, together with the Approximate Percentage of Duties upon the Present Value of the Articles specified; also Tables showing Total Value of British Exports to various Foreign Countries from the Year 1840 to the Year 1878, and of Imports from the same Countries from the Year 1855 to the Year 1878; with Tables showing the Quantities and Values of Iron and Principal Hardware Goods Exported from Great Britain to various Foreign Countries, and Imported therefrom into Great Britain from the Year 1869 to the Year 1878. Wolverhampton Chamber of Commerce, 1879.

This compilation, prepared by a committee of the Wolverhampton Chamber of Commerce, appointed to examine statistics relative to the exports of iron and hardware to foreign markets, will be found very useful as a compendious work of reference. The information concerning the tariffs relates to iron, steel, and hardware only, and is extracted from a parliamentary return issued in 1876. The accounts of the imports and exports—the same class of articles—are taken from the statistical abstracts, and the accounts of trade and navigation published by the Board of Trade. The old German tariff is given as well as the new one, and a moment's examination will show how oppressive the latter is in comparison with that which it superseded, which was, in the matter of iron, a "free trade" tariff.

IV.—*Additions to the Library, with Notes.*

English Municipal Institutions: their Growth and Development from 1835 to 1879. By J. R. S. Vine, F.S.S. Waterlow and Sons, 1879.

Mr. Vine has compiled a very useful volume of statistics on the above subject. He gives a short sketch of the history of English municipalities from the earliest period up to 1835, and then after giving a list of all the Acts of Parliament relating to municipal corporations from the latter year to 1878, with an outline of their general purport, he then describes statistically the growth of these bodies under the various heads of area, population, &c., the statistics under each head being given for all the corporations. The tables are therefore very simple, since only one fact is dealt with at a time. There is an appendix, containing a list of all the Acts of Parliament quoted or referred to in the volume, as affecting municipal corporations, and an index of matter, not in alphabetical order, but in order of sequence in the work, which therefore may serve as an analysis of its contents.

Report on Indian Wheat. By Dr. Forbes Watson. (Presented to Parliament by command of Her Majesty.)

From Dr. Watson's report it appears that India's exports of wheat are likely to become of considerable importance in the grain markets of Europe. The yearly production of wheat in India is already very large, but the wants of the country are sufficiently great to absorb almost the whole of it at present. Dr. Watson estimates the wheat production of India at 40,000,000 quarters, but this total is not obtained from accurate returns, and perhaps it would be safer to take a lower figure. In any case, however, the amount is a large one, probably quite equal to that produced by Russia. But the remarkable feature of this branch of Indian agriculture is the high quality of much of the wheat grown in our great dependency. Dr. Watson was supplied with a large number of samples, 827 in all, from all parts of India, and of these 459 were "equal or superior in value to grades Nos. 1 and 2 of white wheat," that is of wheats varying in value from 41s. 6d. to 48s. per 496 lbs. No less than 101 samples, indeed, were valued at from 44s. to 48s., or nearly the price, at the time of valuation, of the best Australian descriptions. These fine samples, moreover, come from all parts of India, thus showing that their production is not a mere accident. Unfortunately the natives are exceedingly careless in treating the crops when they are once cut; they take no pains, possibly they have not the means, to winnow the grain properly; they do not keep it clean, and often allow different qualities to get mixed with one another, and sometimes with oil seeds and other foreign bodies. At present, therefore, Indian wheat is not as highly valued as it would be if sent to market in good condition. With improvements in this respect, and with careful selection of the best sorts of wheat for cultivation, there can be no doubt that India would be able to export profitably much more than she at present can. The opening of the Indus Valley Railway, and consequent establishment of uninterrupted communication between Lahore and Kurrachee, is also likely to increase the wheat exports of India. One of the superior hard white wheats, about equal in price to Kubanka, is specially suited for the Italian market, where wheat of this quality is in great demand for the manufacture of maccaroni. We give below Dr. Watson's table summarising the results of the valuations performed on the samples under his direction.

Statement showing the Number of Samples of the undermentioned Qualities of Indian Wheats, distinguishing between White and Red, and Hard and Soft Qualities; also the Average Price per Quarter of the Wheats Classified by Colour and Character of Grain.

	Number of Samples.				
	Soft White.	Hard White.	Soft Red.	Hard Red.	Total.
Superior samples, 44s. to 48s. } per quarter of 496 lbs. }	101	—	—	—	101
Grade No. 1, 41s. 6d. to 43s. 6d.	123	13	10	—	146
„ 2, 39s. 6d. „ 41s.	73	83	56	—	212
Ordinary, 37s. to 39s.	51	61	74	68	254
Inferior, below 37s.	9	10	20	75	114
Total number of samples	357	167	160	143	827
Average price per quarter....	s. d. 41 9	s. d. 39 5	s. d. 38 5	s. d. 36 1	s. d. 39 8

Le Journal des Economistes. Juillet et Août, 1879. Among much interesting matter, this publication for July contains an article by M. Paul Coq, entitled “*Les Banques de France et de Belgique; leur operations en 1878.*” M. Coq discusses the position of the Bank of France as compared with the Bank of Belgium, not altogether to the advantage of the former. He approves of the practice of the directors of the Bank of Belgium, who in their yearly report compare the position of the bank, not merely with the previous year, but with a series of years, and he very truly remarks that the course of the bank’s history cannot be observed by merely comparing one annual report with that of the previous year. But, after all, is it the business of bank directors to supply a statistical account of their institution during more than the year on which they are reporting? It surely is right to hold that it is the business of statisticians like M. Coq to trace the general course of trade and the money market, and that bank directors have done their duty if they give ample details concerning each separate year. M. Coq is much displeased that the Bank of France should have been reduced “à prendre sur ‘la reserve’ pour distribuer à ses actionnaires un maigre dividende de 95 frs.” And the reason why the profits were so low in 1878, was the scarcity of bills, a scarcity which we need hardly say has been felt in other countries besides France. His remedy of this unfortunate lack of “matière escomptable” is rather a strange one; he urges the directors of the Bank of France to imitate the example of the Bank of Belgium, and discount foreign paper more largely. But is there, or rather, —for we are speaking of 1878—was there any “foreign” paper that the Bank of France could have discounted without reducing its charges to an unsafe extent? M. Coq says that the Belgian Bank finds this a remunerative business, but it certainly seems questionable whether the foreign bill market is a proper field for

the operations of such an institution as the national bank of a great country. The Bank of France has only been suffering from the same depressed state of trade and commerce which has existed for the last few years in all countries, and in such a period of depression bills of the very highest class, such as would be suitable for it, are as scarce in Paris as in London. M. Coq is apparently of opinion that the heavy discouragement that has so long weighed down the commerce is a consequence of the political events which have marked the rise of the German empire in its successive stages, the defeat of France in 1870, and as a consequence the long course of plotting at Berlin, Vienna, and St. Petersburg, which ended in the assault on Turkey in 1877. These events and other things have no doubt tended to prolong the depression, but the depression itself is quite independent of them, and would infallibly have taken place without their occurrence, owing to the operation of natural causes. M. Coq, in common with many continental economists, has not, in our judgment, paid sufficient attention to the evidence which exists that trade moves in cycles. The *Journal des Economistes* also contains a very thoughtful article by M. de Fontpertuis, on the late John Stuart Mill's posthumous "Chapters on Socialism," recently published in the *Fortnightly Review*. It also contains some remarks by M. H. Passy, on M. Maurice Block's able investigation of the claims put forward by the leaders of the *Kathederoscialismus* to be the expounders of true economic science.

History of the Highland and Agricultural Society of Scotland. By Alexander Ramsay. Blackwood and Sons, 1879. Mr. Ramsay's Annals of the Highland Society is an interesting compilation made from the records of the Society, to which he has had full access. He has considerably added to the value of the book, by giving an account of the two similar societies which existed in Scotland previous to the establishment of the Highland Society; the "Society of Improvers in the Knowledge of Agriculture in Scotland," and the "Edinburgh Society for Encouraging Arts, Sciences, Manufactures, and Agriculture," well deserve to have their history written. The former of these two bodies came into existence as far back as 1723, and it expired in the troubles which fell on Scotland in the famous year 1745. The Edinburgh Society came into existence in 1755, and lasted ten years; its demise occurring through the rather ignominious cause of a complete collapse of its subscriptions. The Highland Society was established in 1783, and has been advancing in magnitude and influence ever since. It now has an income of over 4,500*l.* per annum.

Journal de la Société de Statistique de Paris. Août, 1879. This excellent journal contains interesting articles on "The Influence of Social Position on Mortality," on "Horse Breeding in France and other Countries," on "Pauperism in Switzerland," and on the "Revenue from the Taxable Products of France."

Statistisches Jahrbuch für das Jahr 1877. VI Heft, Wien, 1879. The latest volume issued by the Imperial Royal Central Commission of Austria-Hungary, gives the statistics of crime and of lawsuits in Austria for 1877.

In the new number of the *Zeitschrift of the Royal Statistical*

Bureau of Prussia, is a remarkable paper by Dr. Engel, the Director of the Bureau, entitled "What is a Consumer? and what is a Producer?" (Wer ist Consument? Wer Producent?) In this investigation Dr. Engel offers a valuable contribution to the solution of the above questions. At present the statistics, by means of which they could be fully dealt with, do not exist, and his object is chiefly to show how far we are able to go, and what are the deficiencies of our information. The matter is of international interest, and Dr. Engel hopes that other countries may be induced to make new and improved arrangements for the collection of certain statistics relating to the professions of the population at their next census. Dr. Engel commences his inquiry by dividing the population of Prussia by age into three classes. First, those who are under 15 years old; next, those between 15 and 65, and finally those who are over 65. The first and third classes are essentially "consumers," while the second includes the mass of producers. This classification is of course only a first approximation, but it is close enough for the immediate purpose in hand. As the individuals of the third class may be assumed to have, and indeed have in most cases, provided for themselves out of their past earnings, at all events to a considerable extent, the only class that is really composed of *consumers*, pure and simple, is the first, and the proportion this latter bears to the producing class, gives the "Arbeitsbelastungs-Ziffer," or "figure representing the burden on labour." Dr. Engel gives this figure for the principal countries of the world as well as for Prussia, and carefully points out the circumstances in the case of each nation, which make it necessary to be cautious in drawing deductions from this test alone. Having dealt with the Belastungs-Ziffer at some length, and having shown incidentally that though Prussia has a much higher one than France, this gives no real argument in support of those who say Prussia is over populated, Dr. Engel goes on to notice the defects of this mode of determining the relative proportions of the Producers and Consumers of a State. He says, "although with a few exceptions those who are in the period of labour as far as their age is concerned, may be producers, and usually are, yet it is not *necessary* that they should be, and in the case of a few it is certain that they will not be. This circumstance prevents even the most complete age-classification of the population from being in itself sufficient for answering the questions What is a 'Consumer?' and What is a 'Producer?' We must supplement this investigation by the aid of statistics of callings (Berufsstatistik)." Dr. Engel then proceeds to give statistics of callings, classifying the various trades, &c., under the main heads of "Callings connected with Material Culture," "Callings connected with Political Culture," and "Callings connected with Intellectual and Moral Culture." The word "kultur" cannot, we are aware, be adequately rendered by our "culture," but the sense in which it is here used will be tolerably obvious. Under the head of "Material Culture" are included generally those persons whose daily acts make up the economic phenomena of society, as well as persons connected with the medical profession. "Intellectual and Moral Culture" includes persons connected with reli-

gion, education, art, and literature. The "Political Culture" includes the Government, the army, navy, and all officials of whatever grade. The three classes are divided into producers and consumers, then the number of persons actually engaged in each calling is given, and also the number of those who are dependent on them. Dr. Engel observes that these statistics, which are taken from the Prussian census of 1867, are very defective, but they serve to a certain extent as a guide, and he hopes that in 1880 better measures may be taken to obtain similar statistics both in Prussia and elsewhere. The third method which Dr. Engel proposes, is the division of the population into "Producers" and "Dependent on Producers," distinguishing the former as engaged in producing food or clothes, &c., or in rendering services, as doctors, clergymen, &c. The difficulty of this and similar statistical investigations is one of definition, for the same man may produce the materials for several classes of articles, *e.g.*, a farmer may produce food (corn, meat, &c.) and material for clothing, wool, &c. This very able paper concludes with a description of the information required for the complete investigation of the subject, and which Dr. Engel hopes may be obtained by each country at the next census. He also gives a schedule of the various articles which come under the various heads of his proposed statistics of producers of articles of consumption.

Additions to the Library during the Quarter ended 30th September, 1879.

Donations.	By whom Presented.
Austria and Hungary—	
Statistisches Jahrbuch für 1876, Heft 2; und für 1877, Hefte 6 und 8. 8vo. Wien, 1879	Imperial Statistical Central Commission
Statistisches Jahrbuch für Ungarn, 7 ^{er} Jahrgang 1877, Hefte 4 und 5. 4to. Budapest, 1879	
Hivatalos Statistikai Közlemények Magyarország Vasutai, 1876-ban. (Chemins de Fer de la Hongrie en 1876.) xviii and 287 pp., imp. 8vo. Budapest, 1879	Royal Statistical Bureau
Denmark—	
<i>Statistisk Tabelværk, Fjerde Række—</i>	Statistical Bureau of Denmark
Litra B., N ^o 2. Den Civile Retspleje i aarene 1873-75 (justice civile). 4to.	
Statistiske Meddelelser, Tredie Række, 1 ^{er} Bind, 294 pp., 8vo. Kjöbenhavn, 1879	
France—	
Ministère des Finances. Bulletin de Statistique et de législation comparée, 3 ^e année, June—Aug., 1879. 8vo. Paris	M. A. de Foville
Révue Bibliographique Universelle—	
Partie Littéraire, tome xxv, Nos. 6—8, June—Aug.	The Editor
„ Technique, tome xxvii, Nos. 6—8, June—Aug. 8vo. Paris, 1879	

Donations—Contd.

Donations.	By whom Presented.	
France—Contd.		
Révue Géographique Internationale, 4 ^e année, Nos. 42 et 43. 1879. 4to. Paris.....	The Editor	
Société de Statistique de Paris, Journal de la, xx ^e année. 1879. Nos. 7—9, imp. 8vo. Paris		
	The Society	
Germany—		
Monatshefte zur Statistik des Deutschen Reichs. Band xxxvii, Hefte 4—7. (April—July, 1879.) 4to. Berlin	Imperial Statistical Office	
HAMBURG. Neues Handels-Archiv, Jahrgang 1878, ix and 260 pp. Plates. 8vo. 1879		
PRUSSIA. Zeitschrift des Königlich Preussischen Statistischen Bureaus; 19 ^{er} Jahrgang, 1879. Hefte 1 und 2 (Januar—Juni). Diagrams. 4to. Berlin....	German Consul-General	
	Royal Statistical Bureau	
Italy—		
Annali di Statistica. Serie 2 ^a , vol. 4 ^e e 5 ^e , 1879. Diagrams. 8vo. Roma	Directorate-General of Statistics; Ministry of Agriculture, Industry, and Commerce	
Bollettino Settimanale dei Prezzi di Alcuni dei principali Prodotti Agrari. Anno 1879. Nos. 16—32, imp. 8vo. Roma.....		
Bollettino Bimestrale delle Situazioni dei Conti. Anno X, Nos. 1 e 2, Aprile, 1879. Imp. 8vo. Roma		
Bollettino mensile delle Situazioni dei Conti degli Istituti d'Emissione. Anno X, Nos. 3 e 5, 1879. Imp. 8vo. Roma		
Bollettino di Notizie Commerciali, 1878. Nos. 20 e 21, imp. 8vo. Roma.....		
Bollettino Consolare. Vol. xv, fasc. 5 e 6. 1879. 8vo. Roma		
Statistica degli Affari Civili e Commerciali per l'anno 1876, xxxiii e 208 pp. Imp. 8vo. Roma, 1878		
Statistica del Commercio Speciale Importazione e di Esportazione Gennaio—Marzo, e Giugno, 1879. 4to. Roma		
Movimento Commerciale, nel 1878. viii e 257 pp., 4to. Roma, 1879		
Debiti Comunali e Provinciali al 31 Dicembre, 1877, xlix e 96 pp. Imp. 8vo. Roma, 1879		
Popolazione—		
Movimento dello Stato Civile, anni dal 1862 al 1877, Introduzione con raffronti di Statistica Internazionale, cclxxxi pp., imp. 8vo. Roma, 1878		
Movimento dello Stato Civile, anno XVII, 1878. Parte 1 ^a , 179 pp., imp. 8vo. Roma, 1879		
Garbarino (Giuseppe). Statistica dei Pensionati dello Stato nel decennio 1868-77 e nel' anno 1878. 253 pp., maps and diagrams, 8vo. Roma, 1879		
Rivista Europea, Rivista Internazionale. Vol. xiii, fasc. 3 e 4, vol. xiv, fasc. 1, 2, 3, e 4, e vol. xv, fasc. 1. 1879. Imp. 8vo. Firenze.....	The Editor	
Società Italiana d'Igiene, Giornale della, anno 1 ^o , Nos. 3 e 4. Diagrams, 8vo. Milano, 1879		
	The Society	

Donations—Contd.

Donations.	By whom Presented.
Russia. Annuaire des Finances Russes, huitième année. 1877. Imp. 8vo. St. Pétersbourg, 1879	} M. A. Vessélovsky.
Spain— <i>Socièdad Geográfica de Madrid—</i> Boletin de la. Tomo vi, Nos. 4 y 5, y tomo vii, No. 1. 1879 Sesión en honra de Juan Sebastian de Elcano. 8vo. Madrid, 1879	
Sweden and Norway— NORWAY— <i>Officielle Statistik—</i> A. No. 1. Beretning om Skolevæsenets Tilstand, for aaret 1877. (Instruction Pub- lique) C. „ 1. Resultaterne af Folketællingen i Januar, 1876, 2 ^{det} Hefte. (Résultats du Re- censement) „ „ 3a. Tabeller vedkommende Norges Handel i aaret 1878. (Commerce) „ „ 3b. Tabeller vedkommende Norges Skibs- fart i aaret 1877. (Navigation) 4to. Kristiania, 1879	} Central Statistical Bureau of Norway
SWEDEN— <i>Officiela Statistik—</i> I. Telegrafväsendet, ny foljd 18, för år 1878 (Télé- graphes) K. Helso- och sjukvården— 1. Ny foljd 17 för år 1877 (Hygiène Publique) 2. För år 1877 N. Jordbruk och Boskapsskötsel, XIII, för år 1877 (Statistique Agricole) O. Landtmäteriet, 12, för år 1878 (Arpentage) T. Lots- och Fyrinrättningen samt Lifräddnings- anstalterna å rikets kuster, 6, för år 1878 (Pilotage, Phares, et Sauvetage). Maps 4to. Stockholm, 1879	
United States— Agriculture, Department of, Special Monthly Reports upon the Condition of Crops. Nos. 14—16, June— August, 1879. 8vo. Washington <i>Bureau of Education, circulars of information of the,</i> 1879— No. 1. Training Schools for Nurses „ 2. Proceedings of the Department of Super- intendence. 8vo. Washington <i>Bureau of Statistics—</i> Report of the, for the quarter ended 31st March, 1879. 8vo. Washington Imports and Exports, Summary Statement of the, for the month ended 31st May, 1879, and for the eleven months ended the same [corrected to 10th July, 1879]. No. 11. 10 pp., 4to. Alphabetical List of Private Claims presented to the House of Representatives, First to Thirty-first Congress. Vols. ii and iii (H—Z). Half calf, 4to. Washington, 1853	} Commissioner of Agriculture } Commissioner of Education } Joseph Nimmo, Esq., jun. } American Statistical Association

Donations—Contd.

Donations.	By whom Presented.
United States—Contd.	
Banks, Reports of the Condition of the, 1858. 352 pp., cloth, 8vo. Washington.....	
Report of the United States and Mexican Boundary Survey, by Major W. H. Emory. Vol. i, 174 pp., cloth, maps, plates, &c., 4to. Washington, 1857	
Congressional Globe, The, First Session of Thirty-seventh and Thirty-eighth Congress, 1861 and 1864. Boards, 4to. Washington	
Executive Documents, Thirty-third Congress, 1854-55. Vol. xiii, calf, 8vo. Washington	
Finance Reports for the Years 1852-53, 1854, 1856-57, and 1858-59. Cloth, 8vo. Washington	
Fish and Fisheries Commission, Report of the Commissioner for 1873-74 and 1874-75. li and 777 pp., cloth, plates, &c., 8vo. Washington, 1876	
Indian Trust Bonds, Report of the Select Committee on the Abstraction of, 1861. 365 pp., cloth, 8vo. Washington	
Journal of the Senate, Thirty-third Session of Congress, 1854. 582 pp., calf, 8vo. Washington	
Revenue, Reports of the Special Commissioner of, for the years 1865-66, 1866, and 1868. Cloth, 8vo. Washington	
Art of War in Europe in 1854, 1855, and 1856. Report by Colonel R. Delafield. 277 pp., cloth, plates, &c., 4to. Washington, 1861	American Statistical Association
War, Reports of the Committee on the Conduct of the; Fort Pillow Massacre, Returned Prisoners. Plates, &c., cloth, 8vo. 1864	
American Quarterly Register, by James Stryker, vol. iii, Nos. 1 and 2, September and December, 1849, cloth. 8vo. Philadelphia	
MASSACHUSETTS. Boston City Board of Health, Third Annual Report of, 1875. 127 pp., diagrams, 8vo.	
MASSACHUSETTS. State Board of Health, Sixth Annual Report, January, 1875. xvi and 379 pp., plans, &c., 8vo. Boston	
NEW YORK. Twelfth Annual Report of the Board of Education, 1854. Plates, &c., 8vo.	
NEW YORK. Senate Documents, Fifty-seventh Session, 1834. Vol. ii (Nos. 51 to 126 inclusive), half calf, 8vo. Albany	
VERMONT. Births, Marriages, and Deaths in, Nineteenth and Twentieth Report on the, for the Years 1875-76. Cloth, 8vo. Rutland and Montpelier, 1877-78	
MASSACHUSETTS. Board of State Charities, Fifteenth Annual Report, with Appendix, January, 1879. Cloth, 8vo. Boston	The Board
MICHIGAN. Births, Marriages, and Deaths, Seventh Annual Report of, for the year 1873. xxv and 346 pp., diagrams, 8vo. Lansing, 1879	
WISCONSIN. State Board of Health, Third Annual Report of the, 1878. xlvi and 183 pp., 8vo. Madison, 1879	The Board

Donations—Contd.

Donations.	By whom Presented.
United States—Contd.	
WISCONSIN. Diphtheria, Suggestions for the Restriction and Prevention of, document issued by the State Board of Health of. 8vo.	The Board
American Philosophical Society, Philadelphia, Proceedings of the, vol. xviii, No. 102, plates, 8vo. 1878	
Analyst, The. A journal of pure and applied mathematics; vol. vi. No. 5, September, 1879. 8vo. Des Moines, Iowa	E. L. de Forrest, Esq.
Bankers' Magazine, New York. Vol. xiii, No. 12, and vol. xiv, Nos. 1—3. 8vo.	
Cooper Union for the Advancement of Science and Art, Twentieth Annual Report of the, May, 1879. 47 pp., 8vo. New York	Trustees of the Cooper Union
Franklin Institute, Philadelphia, Journal of the, vol. lxxvii, No. 6, and vol. lxxviii, Nos. 1 and 2, 8vo.	
<i>Smithsonian Institution—</i>	
Annual Report of the Board of Regents, for 1877. 500 pp., cloth, 8vo. Washington, 1878	The Institution
Miscellaneous Collections, vols. xiii to xv, plates, &c. 8vo. Washington, 1878.....	
Western, The, new series, vol. v, No. 4. 8vo. St. Louis....	The Editor

India, Colonial, and other Possessions.**Canada, Dominion of—**

Census of, 1870-71. Vol. v, cloth, 8vo. Ottawa, 1878	J. M. Courtney, Esq., Deputy Minister of Finance
Estimates, for the year ending 30th June, 1880	
Finances, Budget speech, delivered 14th March, 1879..	
Public Accounts, for the year ending 30th June, 1878. 8vo. Ottawa, 1879.....	
Four Maps, showing (1) The Special Survey of Standard Meridians and Parallels; (2) The Extent and Situation of Public Lands; (3) The Disposal of Lands for purposes of the Canadian Pacific Railway, with regulations; (4) The Townships surveyed in Manitoba and North-west Territory. Dated 1878 and 1879	

India, British—

Report on Railways in, for the year 1878-79. By Juland Danvers, Esq. Map, folio [C-2386], 1879....	India Office
Statistical Abstract relating to, from 1868-69 to 1877-78, No. 13 [C-2414], 1879. 8vo.	
Trade of, Statement for the Years 1873-74 to 1877-78 [C-2400], 1879. Folio	India Office
Trade and Navigation Accounts for April, May, and June, 1879. 8vo. Calcutta	
BENGAL. Asiatic Society of. Proceedings, Nos. 2 and 3, February and March, 1879	The Society
Journal, new series, vol. xlvii, Parts 1 and 2, No. 4. 8vo. Calcutta	

Donations—Contd.

Donations.	By whom Presented.
India, Colonial, and other Possessions—Contd.	
New South Wales. Blue Book for 1878. Folio. Sydney, 1879	Agent - General for New South Wales
Queensland. Queensland Gazette, Supplement, containing "Vital Statistics," in monthly numbers. Folio. Brisbane	H. Jordan, Esq., Registrar-General
Straits Settlements. Directory for 1879. Edited by T. J. Keaughran. xxxiii and 194 pp., cloth, 8vo. Singapore	The Editor
Tasmania—	
Mercury, The, occasional copies, containing "Vital Statistics." Folio. Hobart Town	E. Swarbreck Hall, Esq.
Proceedings of the Royal Society of, for 1877. 8vo. Hobart Town, 1878.....	The Society
Victoria—	
Australasian Statistics for 1877, with Introductory Report	Agent-General for Victoria
Statistics of Friendly Societies for 1877, with Introductory Report	
Statistical Register of the Colony for 1877	
General Index to the	
Part 7.—Law, Crime, &c.	
„ 8.—Interchange	H. H. Hayter, Esq., Government Statist
„ 9.—Religious, Moral, and Intellectual Progress. Folio. Melbourne	
Statistical Register of the Colony for 1878	
Part 1. Blue Book	
„ 2. Population	
„ 3. Finance, &c.	Minister of Mines
„ 4. Vital Statistics, &c. Folio. Melbourne	
Report of the Chief Inspector of Mines, for 1878.....	
Reports of the Mining Surveyors and Registrars, quarter ended 31st March, 1879. Folio. Melbourne	
.....	
<hr/>	
United Kingdom—	
Penal Servitude Acts, Report of the Commissioners appointed to inquire into the working of the, with minutes of evidence; vols. i—iii [C-2368, I, II]. 1879. 8vo.	Dr. W. A. Guy, F.R.S., &c.
Railway Returns for England and Wales, Scotland, and Ireland, for the year 1878, with summary tables for United Kingdom from 1854 to 1878 [C-2349] 1879. Folio.....	Board of Trade
Statistical Abstract for the, from 1864 to 1878. No. 26 [C-2360], 1879. 8vo.	
Trade of the, Annual Statement of, for 1878 [C-2371], 1879. Folio.....	
Trade and Navigation, Monthly Returns of. Current numbers	
.....	

Donations—Contd.

Donations.	By whom Presented.
England and Wales—	
Friendly Societies, Reports of the Chief Registrar of, 1877. Part II (B), Appendix (H). Industrial and Provident Societies, 388—II. Folio.....	Chief Registrar of Friendly Societies
Quarterly Return of Marriages in, to March, and of Births and Deaths in, to June, 1879. No. 122. 8vo. London	
Metropolitan Police, Criminal Returns for 1878. 47 pp., 8vo.	Registrar-General of England
Taxation Returns, The Annual Local, 1877-78. (No. 299. 1879.) Folio	Chief Commissioner, Metropolitan Police
	F. Purdy, Esq.
Arts, Journal of the Society of. Current numbers. 8vo. London	The Society
<i>Civil Engineers—</i>	
Minutes of Proceedings of the Institution of, vol. lvii, Session 1878-79. Part 3. Cloth, plates	The Institution
Charter, Byelaws, and Regulations, and List of Members of the. 116 pp., cloth, 8vo. London, 1879	
Durham University College of Medicine, Newcastle-upon-Tyne, Prospectus for Sessions 1879-80. 31 pp., 8vo.	The University
King's College, Calendar for 1878-79. 668 pp., 12mo. London, 1878	The College
Labouring Classes, Thirty-fifth Annual Report of the Society for Improving the Condition of the, 1878-79. 32 pp., 8vo. London	The Society
Manchester Statistical Society. Transactions of the. Session 1870-71. 8vo.	"
Mechanical Engineers, Proceedings of the Institution, Nos. 1—3, January—June, 1879. 8vo. London	The Institution
Royal Geographical Society, Proceedings of the, new series, vol. i, Nos. 7—9. 8vo. London	The Society
<i>Royal United Service Institution—</i>	
Journal of the, vol. xxiii, Nos. 100 and 101. Maps and diagrams, &c., 8vo. London, 1879	The Institution
Appendix to vol. xxii of the Journal. 8vo. 1879	The Medical Registrar
St. Bartholomew's Hospital, Statistical Tables of the Patients under Treatment in, during 1878. xi and 122 pp., 8vo. London	
Social Science Association, Sessional Proceedings of the, vol. xii, Nos. 10 and 11, 8vo. London, 1879	The Association
Surveyors, Transactions of the Institution of, vol. xi, Part 14. 8vo. London	The Institution
University College, London, Catalogue of the General and South Library, with Appendix. Vols i and ii (A—N), cloth, 8vo. 1879	The College
Wolverhampton Chamber of Commerce. European and United States Tariffs; and British Exports to various Foreign Countries from 1840-78, and Imports from the same Countries, 1855-78, &c. 51 pp., 4to. Wolverhampton, 1879.....	Wolverhampton Chamber of Commerce
Ireland—	
Weekly Returns of Births and Deaths of eight large towns, current numbers, with an Annual Summary. 8vo.....	Registrar-General of Ireland

Donations—Contd.

Donations.	By whom Presented.
Ireland—Contd.	
Quarterly Returns of Marriages, Births, and Deaths in. Nos. 8, 25, 31, 48, 56, and 62. 8vo. Dublin....	Registrar-General of Ireland
Detailed Annual Reports of the Registrar-General of Marriages, Births, and Deaths. Nos. 13 and 14, for 1876-77. 8vo. Dublin	
<i>Royal Irish Academy—</i>	
Proceedings, series 2, vol. i, No. 13, April; and vol. iii, No. 3, July, 1879, maps, &c., 8vo.	The Academy
Transactions, Science. Vol. xxvi, Nos. 18—21	
” Pol. Lit. and Ant. Vol. xxvii, No. 2. Plates, &c., 4to. Dublin, 1879	The Society
Statistical and Social Inquiry, Society of. Journal of the. Vol. iii, Part 21, June, 1862. 8vo. Dublin....	
Scotland—	
Weekly and Monthly Returns of Births, Deaths, and Marriages in the eight principal towns of, current numbers. 8vo.....	Registrar-General of Scotland
Quarterly Return of Births, Deaths, and Marriages in, quarters ending 30th September, 1874, and 30th June, 1879. Nos. 79 and 98. 8vo.	
GLASGOW. Mortality tables of the city of, with Remarks by the Medical Officer; for the year 1878, and for the quarter ended 31st March, 1879. 8vo.	Dr. J. B. Russell
GLASGOW. Report upon the Vital, Social, and Economic Statistics of, for 1878. By W. W. Watson. 8vo. Glasgow, 1879	The Author
BOCCARDO (GEROLAMO). Le Banche ed il corso forzato. 166 pp., 8vo. Roma, 1879	
BRACHELLI (Dr. H. F.). Statistische Skizze der Europäischen Staaten. 196 pp., 8vo. Leipzig, 1878	
DANIELS (WILLIAM H.). The Bank of India; Three Letters to the Hon. Edward Stanhope, M.P. 16 pp., 8vo. London, 1879	
FLEMING (WILLIAM). The Index to our Railway System and our Leading Lines, 1878-79 (third number). 110 pp., 8vo. London	
GOEHLERT (Dr. V.). Die Zwillinge. Ein Beitrag zur Physiologie des Menschen. 8vo. Berlin, 1879.....	
HAYTER (H. H.). Infantile Mortality in South Australia. (Paper read before the Adelaide Philosophical Society, 19th March, 1878.) 10 pp., 8vo. Adelaide	
HENRY (JAMES). Æneidea, or Critical, Exegetical, and Æsthetical Remarks on the Æneis, Book III, vol. ii (continued). 8vo. Dublin, 1879	
HEWSON (General M. BUTT). Notes on the Canadian Pacific Railway. 39 pp. 8vo. Toronto, 1879.....	
KAY (JOSEPH). The Condition and Education of Poor Children in English and in German towns (published by the Manchester Statistical Society). 8vo. London, 1853	
LEFEVRE (G. SHAW, M.P.). Address to the Economic Science and Statistical Section of the British Association, Sheffield meeting, 1879. 9 pp., 8vo. London	

Donations—Contd.

Donations.	By whom Presented.
RAMSAY (ALEXANDER). History of the Highland and Agricultural Society of Scotland. 592 pp., cloth, roy. 8vo. Edinburgh and London, 1879.....	The Author
RIDDLE (T. C). Plan for Reduction of the National Debt by means of a Sinking Fund. 1 sheet, 4to. Geelong, Victoria, 1879	
RUSSELL (Dr. J. B.) and } Lectures on the Prevention WALLACE (Dr. W.). } and Control of Infectious Diseases, and on Air, Water Supply, Sewage Disposal, and Food. 213 pp., diagrams, 8vo. Glasgow	Dr. J. B. Russell
STREET'S Indian and Colonial Mercantile Directory, for 1878-79. 774 and 218 pp., cloth, maps, roy. 8vo. London	
VINE (J. R. SOMERS). English Municipal Institutions, their growth and development from 1835 to 1879, statistically illustrated. 272 pp., cloth, 8vo. London, 1879	The Author
WEEKS (J. D.). Report on the Practical Operation of Arbitration and Conciliation in the Settlement of Differences between Employers and Employées in England. 47 pp., 8vo. Harrisburg, 1879	
WEISZ (Dr. B.). Einleitung in die Wirthschafts- geschichte. 76 pp., 8vo. Buda- pest, 1878	"
„ Der Einfluss des Agio's auf den Aussenhandel. 19 pp., 8vo. Wien	

Periodicals—

Athenæum, The. (Monthly parts) Current numbers	The Editor
Bankers' Magazine (London)	"
Commercial World, The.....	"
Economist, The	"
Insurance Gazette, The	"
Insurance Record, The	"
Investors' Monthly Manual, The	"
Nature	"
Review, The.....	"
Statist, The	"

Purchased.

Annales d'Hygiène publique. No. 7. 8vo. Paris, 1879.

Archivio di Statistica. Anno II, fasc. 2, 1878, e Anno III, fasc. 4. 8vo. Roma, 1879.

Block (M.). Annuaire d'Economie Politique et de la Statistique, pour l'année 1879. 24mo. Paris.

British Almanac and Companion for 1879. 8vo. London.

Journal des Economistes. 4^{me} Série, Nos. 18 et 19, June—July, 1879. 8vo. Paris.

Watson (Dr. Forbes). Report on Indian Wheat [C-2348], 1879, with map, folio.

JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1879.

AGRICULTURE in ENGLAND and the UNITED STATES. *The INAUGURAL ADDRESS of THOMAS BRASSEY, ESQ., M.P., PRESIDENT of the STATISTICAL SOCIETY, delivered on TUESDAY, the 18th of November, 1879.*

TURGOT said truly that it is absolutely impossible to follow, through all their successive changes, the multitude of circumstances which cause the fluctuations in prices on the exchange. The most subtle theory, the keenest observation, fail alike to enumerate all the forces which are in operation, to distinguish their relative importance, to determine their true nature, and the precise limits within which their influence is felt.

At the present juncture, while every other industry in the country is gladdened by the dawn of returning prosperity, a dark cloud still rests on the landed interest. Its difficulties have arisen, partly from a succession of adverse seasons, partly from the increased activity of American competition in European markets. I venture therefore to hope that a summary view of the progress of agriculture in the United States will not be inopportune. Our landlords and farmers want information, and in endeavouring to supply it I offer, perhaps, the most practical evidence that I appreciate the honour of filling your presidential chair.

I may explain, *in limine*, that my information is derived mainly from documents very kindly supplied by Mr. Charles Worthington, the able statistician of the Department of Agriculture at Washington. His annual report for 1878 gives the acreage, product, and value of the leading crops for that year. It shows the largest aggregate production in the history of the United States. The total acreage in cereals, potatoes, tobacco, hay, and cotton was 142,474,000 acres. The fruit crops were estimated at 4 per cent. on the improved land embraced in farms, and amounted to 5,000,000 acres. The pasture lands in farms were supposed to be fully equal to the meadow lands, or nearly 30,000,000 acres. Including the smaller miscellaneous crops, the area under culture amounted to considerably over 200,000,000 acres. The total area of improved lands

in 1870, according to the census report, was 188,921,099 acres, which was believed to be much below the aggregate at that date. The subsequent increase of improved lands had been enormous. The area, wide as it is, which has already been brought under cultivation is probably not over one-eighth of the lands in the Union (excluding Alaska) capable of agricultural production.

Acreage, Product, and Value of the Principal Crops of 1878.

Crops.	Quantity Produced.	Acreage.	Aggregate Value of Product.
			\$
Maize bshls.	1,388,218,750	51,585,000	441,153,405
Wheat..... "	420,122,400	32,108,560	326,346,424
Rye..... "	25,842,790	1,622,700	13,592,826
Oats..... "	413,578,560	13,176,500	101,945,830
Barley..... "	42,245,630	1,790,400	24,483,315
Buckwheat..... "	12,246,820	673,100	6,454,120
Total cereals "	2,302,254,550	100,956,260	913,975,920
Potatoes "	124,126,650	1,776,800	73,059,125
Total cereals } and potatoes }	2,426,381,600	102,733,060	987,035,045
Tobacco pounds	392,546,700	542,850	22,137,428
Hay tons	39,608,296	26,931,300	285,543,752
Cotton..... bales	5,216,603	12,266,800	193,854,641
Grand total of acres } and value }	—	142,474,010	\$1,488,570,866 or £297,714,177

It will be observed that peas and beans are not included in cereals in the above table, as in our British statistics. These crops are grown upon too small a scale in the United States to receive special attention from the Department of Agriculture.

The area in maize has tripled in the last fifteen years. The average product per acre during sixteen years was 26·7 bushels. The average for the first half of that period was 26·8 bushels, and for the second half 26·6 bushels. It is remarkable that some of the highest averages are produced by high culture on the sterile soils of New England, and some of the lowest upon the rich lands of the South and West. The facility, however, with which the virgin lands of the West can be brought under this culture undermines high farming in the East, and causes many farmers, especially in New England, to rely upon Western maize. Every year an immense area of new land is devoted to maize. This circumstance discourages high farming, and tends to keep the average product nearly the same. The price per bushel received by the farmer has been fluctuating, though with a general tendency to permanent decline. In 1878 it was 31·8 cents (say 1s. 4d.)

against 99·5 cents (or 4s. 1½*d.*) in 1864. The fall in price indicates rather an appreciation in currency than a depreciation in actual value. It is found that an increase in product causes a decline in price in much greater proportion. The crop of 1878, in total value, was 7,800,000*l.* less than the crop of 1877, though it exceeded the latter in quantity by over 45,000,000 bushels. While the export of maize has greatly increased, it still constitutes but a small proportion, or between 6 and 7 per cent. of the production of the United States. It is used as an article of human diet on the farms of the West and South, but as such it occupies but a small range in the general markets. The proportion of the product so used appears to be declining. As food for domestic animals its place could not be supplied.

The same general remarks may be made of the wheat crops. During the last sixteen years, in which the Department of Agriculture has had a separate existence, it has been noted that the average yield per acre was the same. It was 12·2 bushels during both halves of that period, as compared with 29½ bushels in the United Kingdom, 28½ bushels in Holland, 20 in Belgium, 13½ in France, and 5½ in Russia.

The failure of European crops of late years has created a demand which has caused the American acreage to increase. The wheat acreage of the eight years ending in 1878 averaged about 50 per cent. greater than during the previous eight years. Of the small crop of 1866 the United States exported but 8·3 per cent.; of the enormous crop of 1878 the export has considerably exceeded 30 per cent. During the first eight years, ending 1870, the production is estimated at 5¾ bushels *per capita* of the population; during the second eight years, ending with 1878, it averaged 8¾ *per capita*. The average price per bushel has gradually fallen from 8*s.* 7*d.* per bushel in 1866 to 3*s.* 3*d.* in 1878. Thus the price of wheat in the United States fell from about 65*s.* per quarter in 1866 to 26*s.* in 1878, while the price of British wheat was 49*s.* 11*d.* at the earlier and 46*s.* 5*d.* at the later date.

The influence of over-production in reducing the price of corn is very strongly insisted upon in the monthly report of the Department of Agriculture at Washington for January last. In years when an average crop is obtained in Europe the price in the United States is governed entirely by the quantity produced and the home consumption; the quantity exported being so small in proportion to the enormous amount raised that it exercises no influence on the price. The crop of 1877, amounting to 1,342,000,000 bushels, was valued at 96,128,000*l.* The crop of 1878, amounting to 1,371,000,000 bushels, was estimated at 87,360,000*l.* The product slightly increased, while the aggregate

value considerably diminished. The lowest prices were realised in Iowa and Nebraska, where the area under wheat had been most widely extended. The quantity being too great for home consumption, and the distance too remote from the leading markets, the price had fallen to one-half what it was in 1876. If this reduction in the price of agricultural produce continues, while the activity of the industrial region in New England is stimulated by a renewed demand for metallurgical and textile products, we may look for some check in the progress of wheat cultivation in the United States. The area of wheat production is annually shifting westward. Wheat is the money crop of the pioneer settlers of the West and North-West; maize is their home subsistence crop.

In the United States oats, rye, barley, and buckwheat crops show a tendency to increased acreage, the oat crop of 1878 nearly equaling the wheat crop in the number of bushels. The observations before made in regard to wheat and maize will apply to those now under consideration. A large crop brings a smaller return than a crop below the average. Rye and barley are what the French call industrial crops, and are raised mostly for the manufacture of alcoholic drinks. Their fluctuations in value sympathise closely with those of special branches of manufacture. On the Pacific coast barley is largely grown as food for domestic animals, the corn crop of that region being small. Buckwheat is grown as a second crop of the season after the winter wheat has been gathered. Its use as a fertiliser is more common than formerly.

The potato crop of 1878 was a very poor one in the United States, being 50 million bushels short of an average yield. In the central and southern belts of the Union the sweet potatoe (*Batatas edulis*) is extensively grown, and furnishes a staple food for all classes of the population. The facilities for estimating this crop are imperfect, and hence it is not embraced in the annual statistics published at Washington. It is hoped that hereafter the schedules may be enlarged.

Of other farm crops the most prominent is hay, which in 1878 occupied an area exceeding that of the State of Ohio. Pasture occupies an equal area. The aggregate value of the grass crops of the United States, including hay and pasture, probably exceeds largely that of the wheat crop, and is second only to the corn crop, the great leading cereal.

Two local crops, tobacco and cotton, exercise a vast influence in the markets of the world. The former, covering less than a thousand square miles, is a prominent crop in only twelve States of the Union. The aggregates for 1878 represent a very considerable reduction both of acreage and product. Low prices have dis-

couraged this branch of culture, while conditions of growth have been somewhat unfavourable of late years.

Cotton growing has fully recovered the aggregates of *ante bellum* production. In 1878 the outturn was over 5,200,000 bales of 450 pounds each. The revolution in the labour system of the cotton-growing region has been completed, and its final results incorporated with the social and productive system of the South in such a way as to restore its industrial efficiency. Meanwhile other agricultural interests have risen to prominence greatly overshadowing its importance. It brings an aggregate value much less than that of the grain and grass crops. It is destined to increase and to bring hereafter a more solid gain to the cultivators, in proportion as they conform their efforts more fully to the teachings of economic science in production.

Turning from cereals and green crops to live stock, the farmers of the United States, at the close of 1878, were the owners of 10,938,700 horses, valued at 114,650,961*l.*; 1,713,100 mules and asses, valued at 19,206,794*l.*; 11,826,400 milch cows, valued at 51,390,785*l.*; 21,408,100 oxen and other cattle, valued at 65,908,665*l.*; 38,123,800 sheep, valued at 15,804,797*l.*; 34,766,100 hogs, valued at 22,122,609*l.*; the total value of these animals being 289,084,612*l.*

In view of the extraordinary increase in the agricultural production of America, it becomes a grave question for consideration how far the British farmer can hold his own against the vigorous and apparently illimitable competition to which he is now for the first time exposed. Does the agriculturist in the United States enjoy a complete immunity from adverse seasons and from other visitations to which the tillage of the soil is subject in older countries? What are the charges for freight and railway carriage from the fertile States of Western America to the European markets? If I cannot furnish a complete answer to these inquiries, I will try to make some contribution to the common stock of knowledge.

In the United States the vicissitudes of the seasons are felt, though not perhaps so severely as in our own country. The crops, both of 1875 and 1876, with a larger area under wheat than before, were not up to a fair average. The yield per acre was 11 bushels in 1875, and 10·4 bushels in 1876. Wheat, in the United States, is exposed to enemies from which we are happily free. The far-away States beyond the Mississippi are sometimes visited with a plague of innumerable grasshoppers.

The freights and railroad charges on American produce constitute a most essential factor in calculating the probabilities of a more or less severe competition from the United States. It has

been already stated that the principal sources whence our importations of American wheat and cattle are derived, are rapidly shifting westwards, while we see a marked decline in the produce of the States which are contiguous to the Eastern seaboard. In the older States a considerable quantity of land has been thrown out of cultivation, owing to the impossibility of competing with the virgin soil of the far West. In a contribution to the "*Economiste Français*" of the 14th June last, the aspect of Pennsylvania is described by M. Faupertuis as neglected and almost desolate. The agricultural machinery is deficient and old-fashioned; the farmers are content to live as best they may on the produce of their own land, and many have sunk beneath the load of mortgages, which become more and more burdensome every year. In the State of New York, in the fourteen years from 1860 to 1874, with the exception of certain articles, such as market-garden produce, hay, hops, and potatoes, the growth of which has been stimulated by the development of factories and the increase of the population in the urban centres, every other description of cultivation and all other produce has shown a tendency to diminish, or exhibits an insignificant progress. The five principal cereals, wheat, oats, rye, barley, and maize, furnished 65,215,000 bushels in 1860 and 76,367,000 bushels in 1874. The production of wool fell, in the same interval, from 9,454,000 lbs. to 7,369,000 lbs. The number of live stock—horses, milch cows, sheep, and pigs—was reduced from 5,155,000 to 4,008,000 head, being a diminution of not less than 22 per cent.

According to the special report issued by the United States Department of Agriculture, in January, 1879, the price of horses has fallen off, during the last five years, about 30 per cent. in the New England States, and 35 per cent. in the Middle States. In the same region the number of cows has decreased, although the aggregate number in the Union in 1878 was about the same as in the previous year. Prices, however, have declined in all the States. In some instances the decline is considerably over one-third. The most marked fall is observable in those States where the increase in numbers has been the most rapid. The price per head on 1st January of the same year, for oxen over three years old, was 8*l.* 14*s.* 9*d.* in the State of New York, and 5*l.* 18*s.* 2½*d.* in Nebraska. The price of sheep over one year old was 14*s.* -½*d.* in New York, and 10*s.* -½*d.* in Nebraska.

The ever-lengthening distances from the most fertile cornlands to the seaports of the United States point to an increase in the cost of transport, even under existing tariffs, and there is every reason to anticipate an advance upon the present low rates on the American railways. Owing to the severe competition between the railways and canals, while the latter are open, the average reduction in the

charges for the carriage of corn from Chicago to New York is not less than 50 per cent. below the winter rates. A proportionate reduction takes place in the summer months in the through charges per bushel from Chicago to the English ports. In 1878 the amount fell from 2s. 8d., in January, to 1s. 8d., to 1s. 10½d. from July to September. The average charge in 1866, by the Lakes and the Erie Canal, from Chicago to New York, was 1s. 1½d. per bushel. The rates have now fallen to 3½d. per bushel by canal and 6d. by railway. The average rate for 1878 was 4½d.; for 1877, 5½d.; and for 1872, 1s. It remains to be seen how long the shareholders will give their sanction to a rivalry so prejudicial to their interests.

In the introductory observations to the last edition of "Poor's Railway Manual," it is pointed out that while the tonnage traffic of the railroads of the United States, longest in operation, has been fully doubled within the last decade, the increase in the earnings has been inconsiderable. The tonnage carried on the New York Central and Hudson River Railroad advanced from 4,393,955 tons in 1873 to 8,175,535 tons in 1878, while the earnings from freight fell from 3,923,200l. to 3,809,166l. The tonnage for the five years increased 86 per cent., while the earnings were slightly diminished. The rate for the transportation of freight in 1873 equalled ¾d. per ton. It fell, in 1878, to ½d. per ton per mile. The effect of the reduction of freights is shown in the low average dividends on the railways of the United States. On bonds the average amount for the entire railway system is 4·51 per cent., while the dividend on stock is 2·34 per cent., this low average being still further reduced to 1·92 per cent. in the case of the railways of the Western States.

Much apprehension has been felt that the value of our flocks and herds will be permanently depressed by American importation. A careful survey of the most recent phases of sheep and cattle farming in America scarcely justifies this conclusion. In seconding Mr. Chaplin's motion for the appointment of a Royal Commission to inquire into the condition of British Agriculture, I entered as fully as the information at my disposal enabled me to do into the subject of the trade in horned cattle. I shall confine myself on the present occasion to the bare statement of the most recent figures. The importation of horned cattle fluctuates from year to year, though with a decided tendency to increase. The value of the animals imported into the United Kingdom was 3,296,460l. in 1874; 4,885,462l. in 1876; 3,817,499l. in 1877; and 5,080,702l. in 1878. Sheep increased from 1,610,355l. to 2,185,750l., since which date there has been no appreciable increase. The augmentation in the value of our importations is mainly due to the trade with the United States. The exportation of live stock from that

country increased from 733,395*l.* in 1870 to 5,844,653*l.* in 1878, and four-fifths of the trade is with the United Kingdom.

While the trade in live animals has been developed with remarkable vigour, the growth in our importations of preserved provisions is more steady and sustained. The value of the imports of bacon and hams advanced from 5,902,429*l.* in 1874 to 8,611,329*l.* in 1876, at which figure it still remains. Beef advanced from 523,326*l.* in 1874 to 1,766,362*l.* in 1878. The exportations from the United States of butter, beef, pork, and ham have increased since 1870, by leaps and bounds.

I now turn to the sheep husbandry of the United States. It is estimated that the number of sheep in that country has increased from 28,477,951 in 1870 to 31,851,000 in the present year. In 1879 the increase in the number of sheep, over the whole Union, was estimated at 5 per cent. But here, again, it is chiefly in the newer States that the progress has been made. In the middle States both the numbers and the value per head were slightly reduced, the depreciation, however, being less considerable than in the case of other kinds of farm animals.

Wool can be grown at a great profit in the main range of the Rocky Mountains, where the yearly cost of keeping sheep has been popularly estimated for several years at 1*s.* 3*d.* per head. But the breeds to which attention will be directed in the more populous regions will be those which produce mutton at the cheapest rate, of the best quality, and in the largest quantity. In the middle and eastern States of America, sheep husbandry, for the purpose of growing wool, is not remunerative. The production of mutton must be combined with the growth of wool, in order to insure a satisfactory return. The success which has been achieved in sheep-husbandry in England is due to an early appreciation of the value of sheep for the production of meat.

The fertility of the soil under English farming is attributed by the Department of Agriculture at Washington to the large number of sheep which we maintain. Dairying, and the shipment of its products, withdraw the phosphates from the land. The feeding of sheep tends directly to its enrichment. As sheep have become a more prominent element in British agriculture, so the yield of wheat has increased to the present high average. The land of the United States, it is asserted, will never become more fruitful than at present, without the aid of meat production as a permanent element of farm economy. Worn-out hay farms in the State of New York have been restored to a high degree of fertility by the steady introduction of sheep.

In France the predominance of merinoes has retarded the increase of their flocks; but the process of "muttonising the merino

"breeds" is in progress, and meat is now the first consideration with the French as with the English breeders. In the older States of America the same transition is taking place.

The English farmer has suffered some anxiety of late, owing to the large importations of sheep, bacon, and ham from the United States. It would seem, however, from the most recent official reports, that the prices of these articles have touched a point at which it is impossible that they can be maintained. In point of fact, the price of bacon advanced in the English market not less than 20 per cent. in September last. The prices for hogs, in January, 1879, were described as ruinously low. The records of the Agricultural Department had never shown so low a price. The increase of 5 per cent. in the number of animals was mainly caused by large additions to the stock in the States lying west of the Mississippi River. The average prices per head for hogs over one year old are given at *1*l.** in Illinois, and *1*l.* 18*s.* 6*d.** in New York. The swine in the United States have suffered very much from a disease known as the hog cholera.

In considering the prospects of British agriculture in competition with the United States and Europe, the cost of labour is an important element. If the cost of performing the various operations of agriculture varied as the rate of wages, it is evident that British farmers would have little reason for misgiving at the prospects of American competition. According to Mr. Caird, the dividing line between high and low agricultural wages in the United Kingdom follows the line of coal. In the northern counties the average weekly wages were *11*s.* 6*d.** in 1853, and *18*s.** in 1873. In the southern counties the rate had risen in the same interval from *8*s.* 5*d.** to *12*s.** Turning to the United States, the average farm wages in 1879, in Maine, Massachusetts, Kentucky, Ohio, and Illinois, were about *6*s.** a-day, without board, in the harvest months, and about *4*s.** a-day during the rest of the year not in the harvest months. In Kansas the rate was about *1*s.** per day, in California it was *3*s.** a-day, higher in the harvest months, and *2*s.** a-day more during the other seasons of the year than the rates already quoted. Taking a rough general average throughout the northern States, wages may be taken at *4*s.** a-day for unskilled, and double that amount for skilled labour. The cost of provisions is lower in the United States than in Great Britain; but rents, clothing, and every description of manufactured goods are much dearer than with us.

It is sometimes said that the monopoly of capital is gradually leading to the extinction of small farmers and small manufacturers and shopkeepers, and that the gulf between the privileged few and the mass of the community is ever becoming wider and deeper.

Let us examine this subject by the light of the latest agricultural statistics.

The number of large farms is increasing, and the acreage of farms under 100 acres is diminishing, but the process of change is slow. We find only a fractional difference in the number of farms of 200 acres and upwards in 1851 and 1871; and it is a most remarkable circumstance that the distribution of land for the purposes of cultivation is approximately the same, under the system of absolute liberty to buy and to sell which prevails in America, and under the more restrictive system which has been handed down from a remote antiquity in our own country. The average size of the farms in seventeen representative counties of England has been ascertained to be 152 acres. The average size of the farms of the United States, according to the census of 1870, is 153 acres.

The number of farms reported in census enumerations of the United States have been as follows :—

In 1850	1,449,073
„ '60	2,044,077
„ '70	2,659,985

The number at the present time will considerably exceed 3 millions.

The average of these holdings has been as follows :—

	Acres.
In 1850	203
„ '60	199
„ '70	153

The average size tends constantly to decrease, and the present average is less than that of 1870.

If smaller holdings had been found to offer greater advantages to the occupiers, no obstacle would have been raised on the part of the English landowners, as a body, to a more minute subdivision. The area of our farms has been determined by long experience, and has been settled, as between landlord and tenant, by countless independent negotiations, each party to the bargain having looked mainly to the protection of his own interests in the transaction. Here, therefore, we find yet another illustration of the practical ability of the English people to correct imperfections of method and of form without the aid of legislation. Our practice is more perfect than our theory. We allow obsolete laws and unjustifiable privileges to fall into disuetude where a strict exaction of legal rights might lead to great abuses.

Let us turn from the tenure to the cultivation of land. It should be the aim of British statesmen to direct the attention of the agricultural section of the community to the expediency of

raising the utmost diversity of products. The Department of Agriculture in the United States assists the farmers by the publication of monthly reports on the condition and prospects of the crops both in Europe and America, it conducts experiments in the growth of fruits, vegetables, and farm crops, and publishes a series of useful manuals for the guidance of those who may desire to undertake some new cultivation. When the corn, the rice, and the cotton areas in the South became less remunerative than formerly, the Department pointed out that diversity of crops was the principal requirement of American agriculture, indicating, for example, the advantageous results that might be anticipated from the cultivation of sugar.

In other official publications, the Department has urged that Congress should form a reeling establishment, for the purpose of training those who may be disposed to embark in silk-culture. With the same object in view—that of encouraging the cultivation of new products, and introducing the utmost diversity in the treatment of the soil—the Department has recently published a useful manual on the cultivation of the fig.

Unaided by advice and suggestion from the Government, our own agriculturists have recognised the necessity for a change in the cultivation of the land in the United Kingdom. The agricultural returns for the last three years show a decrease of 9 per cent. in the extent of land under wheat, and a decrease of $3\frac{1}{2}$ per cent. in the area under oats. Under barley there is an increase of 10·3 per cent.; under potatoes an increase of $5\frac{1}{2}$ per cent. The returns of 1879, when compared with those for the preceding year, show a decrease in the area under cultivation of 11 per cent. in the case of wheat and 3 per cent. in that of oats. Under barley the increase amounts to 8 per cent. Mr. Caird, carrying the computation further back, informs us that in Great Britain, in the last ten years, the total extent of arable land remains unchanged, while the area of permanent pasture has increased by a million acres, or 8 per cent. England is becoming a dairy-farm, a grazing country, and a market garden, looking to distant lands for corn and other commodities, which bear long transport from places where they can be more cheaply produced. Mr. Caird highly approves the policy which our agriculturists have adopted. Our climate is the most favourable in Europe for the production of milk, meat, vegetables, and grass. It has been complained that farm labour is growing dearer. In proportion to their value, the products just enumerated are the least costly in labour. Mr. Caird predicts that the poor clay soils will gradually be laid to grass, and that much of that vast tract in the United Kingdom, which has been left to nature, will be reclaimed for the rearing of sheep and cattle.

Mr. Whitehead, of Barming, near Maidstone, is a high authority on fruit and vegetables. He has lately published two valuable pamphlets, from the pages of which the following information has been borrowed. The pamphlets should be read by all who are interested in the useful subjects of which they treat.

The acreage under potatoes in Great Britain, during the eight years ending 1877, was 544,345 acres, or, within a fraction, the same as in 1879. The total cost of cultivating an acre of potatoes is estimated at from 17*l.* to 25*l.*, and the yield at from 5½ to 10 tons. The average price for the last ten years in London was 5*l.* 10*s.* per ton; and the growers have generally realised a handsome profit.

The acreage of fruit land in 1877, including orchards with grass under the fruit trees, and cultivated fruit land, was 163,290 acres. It increased in England alone from 153,277 acres in 1877 to 159,095 in 1878. A proportionately large addition had been made in the four preceding years, and chiefly in the neighbourhood of London. The cost of planting with apple and pear trees varies from 9*l.* to 14*l.*; the cost of maintenance from 2*l.* to 5*l.*; while the average return may be set down at 10*l.* per acre. In ordinary seasons the cultivation of fruit is fairly profitable, and in favourable seasons, when not less than 50*l.* per acre is sometimes realised, it is highly remunerative.

The extension of fruit plantation has been checked in consequence of the heavy outlay at the commencement, and the absence of any definite right with regard to compensation to tenants. Under the Agricultural Holdings Act the planting of orchards is scheduled as a first-class improvement, for which the tenant may claim compensation within a period of forty years. If this payment were in all cases obligatory, Mr. Whitehead is of opinion that large additions would be made to the acreage of fruit land in England, and that great improvements in the cultivation and management of the existing acreage would result.

The agricultural returns of Great Britain for 1879 exhibit a decided extension of the area employed for market-gardening. The extent was 40,582 acres, as compared with 37,273 acres in the preceding year. The cultivation of vegetables is conducted with considerable profit. Cabbages frequently realise from 60*l.* to 70*l.* per acre. Not less than 180*l.* per acre has been made from onions, but 35*l.* is an average return, the usual crop being about 14 tons per acre. The average return from cucumbers is 45*l.* per acre. The rents of market-garden land within 20 miles from London range from 4*l.* to 9*l.* Labour expenses amount to from 6*l.* to 9*l.* per acre. Market-gardening might be extended with advantage in many districts. Vegetables will ripen, fruits will become fit for culinary operations, in seasons when cereals fail.

In a paper lately read before the British Association, Mr. Shaw-Lefevre has shown that the agricultural development of America need not, and probably will not, permanently injure the economic condition of this country. The additional statistics collected in the present paper seem to point to the same conclusion.

Well-informed American newspapers, such as the "Iron Age" and "Daily Bulletin," have lately expressed an opinion that the United States may be on the verge of an excess of agricultural production. The railway companies may raise their tariffs. Such a step must either lead to a rise in prices, or reduce most materially the profits, and so discourage the development of agriculture in the far West. In the meantime, the return of more favourable seasons and the reform of the land laws may ameliorate the condition of the farmer in England at the very time when the condition of the agriculturists of the United States may have ceased to be as flourishing and prosperous as it is at the present time. As the husbandmen of that country advance towards the western seaboard of the continent, leaving behind them vast tracts of land exhausted by a few consecutive years of cultivation, the cost of transport to this country must steadily tend to increase. To restore the fertility of the New England States by the use of manures is a perfectly practicable operation; but the cost of cultivation under these conditions would probably be greater than in the United Kingdom.

These remarks apply primarily to the case of wheat; but they apply with still greater force to the importation of live stock. Cattle and sheep have diminished in numbers in the more accessible Middle and Eastern States; they have increased in the pastoral regions west of the Mississippi. It is incredible that animals can be transported by rail from the pastures of the Rocky Mountains, across the wide continent of America, and then transhipped to Liverpool, at prices sufficiently low to deprive the British agriculturist of his legitimate profit. In process of time payment will be exacted for the use of the pasture, even in the remote grazing districts of the West. Hitherto it has been left free to all comers.

In view of these considerations, a permanent and indiscriminate reduction of the rentals of land in England should not be resorted to. Landlords may properly be asked to assist their tenantry to tide over a temporary difficulty by a reduction of rents; but such concessions should neither be demanded nor conceded for a lengthened period.

In the state of uncertainty in which both landlords and tenants are at this moment placed, long leases would seem to be equally undesirable on both sides. The tenant should be effectually protected against capricious eviction. He should be entitled to ample com-

pensation for improvements; but rents cannot be determined on any equitable basis for a series of years in advance.

The horoscope of the future has been cast with philosophical acuteness in the papers from the pen of M. Leroy-Beaulieu, which have lately appeared in the "*Economiste Français*." He admits that some districts of Europe may suffer permanent loss from the competition of the New World, with its boundless extent of land, and its fortunate immunity from the burden of rent. But he looks upon reduction of rent as necessary only under certain exceptional circumstances, and in certain localities. If rents are permanently reduced, it will be due to a corresponding fall in prices. If the tendency is general towards lower profits, the loss of income may be fully compensated by the increased purchasing power of money—by the cheapness, in other words, of the necessaries of life.

Steam and electricity are great levellers; and the abundance of capital, the general diffusion of education, the closer rivalry in every field of human endeavour, combine to equalise the circumstances of individuals. Such changes are not misfortunes. Those young communities beyond the sea which are advancing with such rapid strides—the two Americas and Australia—will not allow the Old World to slumber. But, if we feel the effects of their keen competition in our markets, they insure us against famine, and furnish our dense and increasing population with welcome and abundant supplies.

False expectations I would not dare encourage; but when farms are being abandoned in all directions, it is our duty to make a careful examination of the facts, and to endeavour to allay all groundless apprehensions.

"True hope is swift, and flies with swallow's wings,
Kings it makes gods, and meaner creatures kings."

British agriculture will never revive under the fatal influence of despair. The direction may be changed, but the forward movement must continue.

PROCEEDINGS *on the* 18th NOVEMBER, 1879.

(THE President having delivered his address, proceeded to say :—)

Ladies and Gentlemen—I daresay you are aware of the circumstances under which the Howard Medal was established by the Statistical Society. You know that it was established to commemorate the memory of that great and good philanthropist whose name it bears, and I daresay you are aware that the subjects chosen for competition are such as Mr. Howard himself took a deep interest in, and that they are connected with the humane labours to which he dedicated his philanthropic life. On the present occasion Dr. Guy and Mr. Heywood have been the referees upon whom has devolved the responsibility of awarding the medal to the most successful writer, and I am very pleased to announce to you, that the successful competitor on the present occasion is, for the first time, a lady—Miss Beatrice A. Jourdan. It is a most pleasing duty to hand the medal, on the part of the Society, to the successful competitor. I am sure I shall be doing what you will all wish me to do, when I say that I am delighted a lady is the winner. It is refreshing to believe that Statistics can be made agreeable by the treatment which I am sure they will receive from ladies who study them. We know how much they desire to promote the social well-being of the community, and we also know very well that these efforts unless they are wisely directed and controlled by correct information, may sometimes be provocative of an anticipated evil. I will, without further preface, hand the medal to Miss Jourdan.

The presentation was made with a considerable manifestation of applause.

THE PRESIDENT: I have now to announce the subject for the Howard Medal which will be awarded in November next:—"The Oriental Plague, in its Social, Economical, Political, and International Relations; special reference being made to the labours of Howard on the subject."

DR. GUY: This is the first meeting, I believe, of this Society on which it has been proper or possible to address the audience generally as "Ladies and Gentlemen." We are honoured this evening with the presence of several ladies desirous of doing honour to one of their sex who has obtained distinction among us. My name has been mentioned as one of the two who were appointed by the Council to determine between two excellent Essays. On the subject of education I do not claim to be a great authority; but I think I may safely say that when I mention Mr. Heywood as my colleague, I have every reason to think the decision arrived at a sound one. The task was not an easy one; for both the essays sent in were of considerable merit. The subject of the essay was "The improvements that have taken place in the education of children and young persons during the eighteenth and nineteenth

centuries." Now among the many social subjects to which Howard gave his attention, none interested him more than education; and this consideration determined the choice of the Council.

Now, Sir, I turn to a duty which has been rendered peculiarly agreeable by the opening sentences of the address to which we have just listened with so much pleasure and profit. You spoke so modestly of your own performance, that this meeting might have been led to expect at your hands some ordinary and commonplace production; but I ask whether the address you have just given us deserves that title. We must all feel not only that your address has been admirably compiled, but that it is exactly of the sort that at this moment is most wanted in England. I will not say more on this point, seeing that there is a gentleman on my right who will presently address you, and who is a far higher authority upon it than I can claim to be. I would, however, ask your attention for a few moments to what our President said of a certain plot of ground bordering on Whitehall. I cannot encourage our friend Mr. Giffen to leave that field of labour in which he has shown himself *facile princeps*, for experiments in cultivation, for which I venture to predict a disastrous failure. I do not believe in the cultivation on the spot in question of mustard and cress, or anything of that sort. But what I do believe in as a good paying crop is a crop of buildings; and I think we may look to our President to promote the growth of a crop of this kind. I am speaking of a waste piece of land bordering on Whitehall, which has for one of its tenants the Chapel Royal. It has lain waste for years, and according to precedent will lay waste for years to come. If nobody moves the Government to action nothing will be done. I am very much disposed to ask the Government once more for a bit of that ground. The Government may say *yes*, but if they say *no*, the public will still be benefited. I will explain myself by repeating what I believe I have said before about circumstances that occurred now several years ago in this immediate neighbourhood. There was a very deep chasm in the earth close to Waterloo Bridge in the spot now occupied so usefully and ornamentally by the Inland Revenue Office. It had lain waste and worse than useless, I should think for a hundred years at least—a grievous sight to all economists. Well, King's College having long felt the want of an Hospital, asked the Government of that day to be allowed to build it on this worthless piece of ground: but the Government all at once found that they had got a use for it. So that the authorities of King's College, though they failed in their application to Government, were the means of stirring it up, and so hastening (who can say by how many years) the profitable and ornamental occupation of that worthless and unsightly spot. Perhaps, therefore, if we ask the Government to give us a building site on waste land near Whitehall, we might be told that it could not be given up for such a purpose. But for my part I cannot help thinking that science is a very proper subject for the Government to patronise. View it in what light you will; and I venture to think that this Society (the Royal Society, as I like to call it, of the Social Sciences) has special claims of its own. Here

we are spending our money and labours, and doing a great deal of work which the Government must otherwise do for itself, and why, I ask, does it not acknowledge our services in the same substantial way in which it has acknowledged the services of the Royal Society and of the other societies to which it has given a home in Burlington House? I hail the advent of our new President as of one who is very likely to be listened to on this or any other kindred subject. I confess I should like to go to the Government first, not because I am sanguine of success in that quarter (and I speak after some experience), but because I should like the Government to have one more opportunity of showing their appreciation of science, and doing their duty by us.

Of agriculture I am sorry to say I know very little, and that indirectly. But I am told that when agriculture is very prosperous a great number of persons who have made money in towns are seized with a desire to spend it on the land, being possessed with a strange belief that agricultural skill comes by nature, and requires no special training. These, I have good reason to believe, are the persons who suffer most in these trying times.

There is one other topic I should like to touch upon, I wish to remind our Fellows that Sir Rowland Hill was a member of this Society, and that he brought under our notice more than once the great subject he had taken in hand. On the last occasion on which he addressed us, he gave proof that his anticipations had been founded on good sense, and sound figures. I should be sorry if, as a Society, we lost sight of the fact that there is a subscription on foot for a memorial to so great a man. If we would but think of what Sir Rowland Hill had done, not only for this country, but for the whole world, we should wish to take part as a Society in the effort now making to do him honour.

I am quite sure, Sir, that every one present will join in a vote of thanks to you for the admirable paper you have read to us, so well timed and so full of sound material and good advice. We all hope that on many occasions during your tenure of office, we shall have the advantage of your presence among us.

SIR RAWSON W. RAWSON said, I have the honour of seconding the motion. I think we are indebted to our President not only for the address he has given to us, but for the subject he has chosen. He has given us a great deal of information, and brought before us facts upon authority which no man will dispute, because it is perfectly disinterested. It is the voice of a man of experience and of sober judgment, whose opinion will enjoy repute with those who listen to him. Free from party interests, free from political inclinations, he has brought before us a subject which is of the highest moment to our agricultural interests at the present time. I had the opportunity of hearing Lord Beaconsfield at Aylesbury. He took up the same theme, and he said pretty much what Mr. Brassey has said to us to-day: but of course all those who listened to him, knew that he spoke with an object, knew that his opinions were likely to be influenced by the position and the responsibilities under which he spoke. That does not apply to our President. Our

President brings before us as pure matter of statistics the facts which have come to his knowledge, which he, with his great experience, and his habits of analysis, has been able to examine carefully, and to put before you, as I believe, most correctly, and certainly most encouragingly to our agricultural interests. John Bull is very apt, both as a politician and as an economist, to have two faults—first, to be very confident of the sufficiency of his own position, and of his own action, and to shut his eyes to coming dangers. His other fault is that when he is once aroused, he is too apt to be frightened at the prospect that suddenly opens out before him, and to yield to almost panic; and that has been the case very much with our agriculturists. It is of the greatest importance that men thoroughly independent, thoroughly competent, should bring before them such information as will act as a *per contra* to the bugbears which arise. There is no doubt that the wonderful power of production of the United States, and their opportunities of shipping their surplus to us, must affect our interests; but Mr. Brassey, as well as our late President, and I think the Society may rejoice in the fact, have been foremost in laying before the British public, and the British agriculturist, the real state of the case, and furnishing them with information which ought to diminish, if not to allay, their apprehensions with regard to the future. Having heard of the subject to be brought forward this evening, I brought with me a cutting from an account given by a member of the Cape Assembly, whom I knew in the olden time, who had gone over to California, and sent an account to his countrymen of what he saw there. I think it will interest you with regard to some of the extraordinary powers of production in the United States; at the same time it will also show you the dangers that attach to that excessive production, to the cost of production, to the danger of a failure of markets there, which must bring upon them overwhelming losses, and so discourage the production of cereals as to reduce the danger to our own producers. He writes to his friend at the Cape—"A Californian farmer rejoices if he can only get 9s. 6d. a Muid* for his wheat, and 5s. 6d. for his mealies, and yet he has to pay 5s. a-day for his farm labour, and from 4l. to 15l. per Morgen* for his land, situated very far from a good market, most of the grain being exported to Liverpool, 12,000 miles off, and once in every five years he loses his crop through drought."

Now that is a point our President did not touch upon to-night. He assumed that the American farmers paid no rent for their land; but here it is stated they have to pay rent for their land, and those rents, of course, will go on increasing.

The writer goes on to say:—"How shall we account for the differences? The only solution I can give is that the Californian farmer largely uses first-class machinery. One complicated machine in universal use on large farms, cuts, threshes, cleans, and bags 60 acres of wheat in one day; and they plough up every available acre. To give you an idea of the gigantic scale on which they farm here,

* These are Dutch measures in use at the Cape of Good Hope. One Muid equals 2·972 imperial bushels; one Morgen equals 2·11654 acres.

I may mention it was stated in yesterday's paper here, that Mr. Glenn, the owner of a farm measuring 55,000 acres, expected to raise 30,000 tons of wheat this year, enough, from his farm alone, to fill thirty large ships." Now that man may succeed one year, what if a drought comes? "This farm is of course exceptionally large; but I have passed through 150 miles of wheat without a break, except the hedge boundaries belonging to different proprietors." I thought it would interest you to hear the extent to which cultivation is carried on there. But the paragraph mentions they have to count on periodical droughts, besides the disease referred to by the President; constant droughts, frequent hurricanes, 5s. a-day for labour, increasing cost of transportation, failing production in the Eastern States, and the competition of our own food production here. Just fancy the difference between an average of 12 bushels of wheat an acre in the United States, and 29 bushels in the United Kingdom. I think we are exceedingly indebted to our President—both for his choice of a subject, and for the way in which he has treated it.

Mr. JAMES CAIRD said: It has given me very great pleasure indeed to be present on this occasion. The chairman has done me the honour to refer to me by name in the course of his able address, for which I beg to thank him. I must say that while he set forth to us at the beginning the startling extent of the area from which we might look to derive supplies at some future time from America, he did, towards the conclusion, somewhat allay the fear that might have been otherwise entertained by agriculturists. But we should be wrong to shut our eyes to the fact, that while America has already 200 million acres of land under cultivation—five times the area we have in the British Islands—that is but one-eighth the area that is capable of future development. That seems to me a most important fact. There has been no time in my recollection, or in that of the oldest man in this room, in which the British agriculturist was labouring under greater real difficulty and apprehension than at this moment: I remember 1848 when the corn laws were repealed, and on to 1850, when great fears were entertained by the landowners and farmers of the future of British agriculture; but the present in point of apprehension greatly transcends anything we then experienced. The gentleman who spoke last, referred to the probability of a rise in the cost of transport. I think he is mistaken there, the whole tendency is quite the other way. When we look at North America, and consider her vast inland navigation, her great expanse of lakes and navigable rivers, her canals, and the widening and deepening the Welland Canal, and the rapids on the St. Lawrence, by which the inland lakes are connected with the sea; when then to this we add the competing lines of railways spreading westwards, all these point to increasing facilities and gradually lessening rates of transport. In eighteen months from the present time we are told that we may look to see ships loaded with grain in Chicago and Lake Superior, delivering their cargoes in the ports of this country. I think, therefore, the British agriculturist should be under no delusion,

but set himself manfully to consider how he can best meet this inevitable competition. I was struck while the chairman was reading his paper, with the similarity of the 200 million acres under cultivation in America, to the same extent in India, where I have lately been; but in that country there are 200 million of people. The difference is this: the land of both is rich naturally; but India has for ages had a population living on this rich but now comparatively exhausted country, while in America there is a small population bringing into cultivation an equal extent of prairie land, entirely unexhausted. Whilst I, thank you, Sir, for the information you have given to us to-night, speaking as a landowner and cultivator of the soil, I feel we have nothing in the future agriculture of this country to look forward to but increasing competition. We, however, have the advantage of being nearest to the best market in the world, and we must do our best, by skill and ingenuity, to meet that competition.

Dr. GUY having put the resolution to the meeting, which was carried unanimously,

The PRESIDENT said: I am very much obliged to you for the kind manner in which you have recorded your appreciation of the paper which I have submitted to your consideration, and for the encouraging observations that have been made. Any statement on the subject, whether it is received in an optimist or pessimist spirit, must evoke a considerable amount of criticism; indeed, it is almost impossible to present in just proportion all the circumstances of the case within the compass of a paper to be read in an hour, or less than an hour. As long as we adhere to facts honestly collected, the public gains information. If the facts collected by one labourer in the field point perhaps, as it may be thought, too much in one direction, another labourer in the same field, equally faithfully working, and collecting nothing but facts, may perhaps be able to correct any wrong conclusions; and the public, balancing all that is thus brought together in an honest spirit, will arrive with true English common-sense at a sound conclusion. What I said in my paper with reference to English agriculture, I think did great honour to English agriculture. We were not spurred and stimulated by foreign competition, and yet we seemed to do better than any foreigners. We had to face severe foreign competition, and I have no doubt we shall show all our national ingenuity and energy in adjusting ourselves to these new conditions. The intermediate stage through which we are now passing is no doubt a very severe one. I trust nothing I have said indicates any want of sympathy with the farmers. I am myself the grandson of a yeoman farmer, and the descendant of a long line of ancestors following agricultural pursuits, and connected in various capacities with the landed interest in Cheshire. I have a great affection for the agricultural class, and the greatest desire to help them. It was in that spirit I set to work to gather information for the purposes of a paper this evening.

ADDRESS of the PRESIDENT of SECTION F, "ECONOMIC SCIENCE and
"STATISTICS," of the BRITISH ASSOCIATION, at the FORTY-NINTH
MEETING, held at SHEFFIELD, in August, 1879. By G. SHAW-
LEFEVRE, ESQ., M.P.

I CANNOT commence my address to the present meeting of this Section without referring to the very brilliant essay delivered last year at Dublin by my predecessor, Dr. Ingram, and which has justly attained an European fame and circulation. It was at once a vindication of the claim of Sociology to a high place in the proceedings of this Association, and a protest against the somewhat narrow limits and methods which political economists have for some time past imposed on themselves. With most of his arguments and statements I cordially concur. So far from agreeing that this is a time when we should abandon sociological inquiry as beyond the limits of true science, I venture to think there never was a time when it was more desirable that these subjects should be treated in a scientific manner.

I do not purpose, however, on the present occasion to follow Dr. Ingram further in his philosophical disquisition on the proper limits of economic inquiry, but I shall endeavour to deal with one of the many questions which are unquestionably open to us.

There can scarcely be a more interesting economic question at the present time than the state of agriculture and the causes of its present depression. How deeply important is it that we should be able to trace the causes of that depression, to analyse how far they are of a climatic and temporary character, and how far they are due to the competition of foreign produce; to what extent also the low prices are due to the alteration in value of gold; and, having ascertained this, to discuss how far we may expect these causes or any of them to continue or to diminish in their effect, and to estimate their ultimate effect upon rents, on wages, and on the profits of farmers, and indirectly upon other interests of the community.

Pending the investigations of the Royal Commission recently appointed to consider the subject, it may seem almost an act of temerity to venture upon it; but the report of the commission will probably not be forthcoming for two years; in the meantime events will not wait for it, and it is desirable that every light should be thrown upon the subject by independent criticism and observation. I feel also that I owe no apology for so doing, for although the

community in which we meet is essentially a manufacturing one, yet it will be admitted that the depression of a great interest like that of agriculture has a serious import and effect upon every other interest in the country, and is probably at this moment one of the causes of the stagnation which is so much complained of in the manufacturing world.

It must be admitted most freely that the agricultural interest, or at least a large part of it, has suffered severely during the last few years from a combination of bad harvests and low prices. These phenomena are especially to be noted since the year 1873; of the six years including and following that year, four have been years of exceptionally bad harvests, giving results of from 20 to 25 per cent. below the average; and for the whole period the average production of cereals has been 13 per cent. below the average. In the memory of living men there has been no such concurrence of bad seasons.

Bad harvests, however, in previous years were generally followed by higher prices, which recouped the producers to a great extent for the deficient quantity; but bad harvests during the last six years have not only not been followed by higher prices, but in the case of wheat at least, prices have fallen still lower, and the consequence has been most serious to those who rely mainly on this cereal. But when, in addition to the low price of wheat, we take into account the reduced acreage of corn cultivation, the reduced number of cattle owned in the country, notwithstanding the greatly increased price of meat, and the rise of wages of agricultural labourers which occurred in 1872, we can easily realise the great losses of those farmers who rely mainly upon corn for their returns, and who cultivate the heavy and inferior lands of this country.

The produce of wheat is so important a part of the agricultural industry of so large a proportion of the country, that it may be taken as to a great extent an index of the position of agriculture; its abundance and price are also of not less interest to the bulk of the population of this country, who rely upon it mainly for their food. It is worth while, therefore, to pay special attention to this product. The position of the producer with respect to it may best be estimated by multiplying the known average produce per acre in each year by the average price obtained for it in the twelve months succeeding the harvest.

I have before me a table constructed on this basis, showing the average product in money per acre of wheat for each year since 1849. It shows that for the first four of these years, following shortly after the repeal of the Corn Laws, the production of wheat must have been anything but profitable to farmers; the harvests were somewhat above the average, but the prices were very low,

averaging only 41s. per quarter, and the result in money to the farmer for an average acre of produce was only 7*l.* 9*s.*; after that year prices again rose, and for the next twenty years the average product per acre in money was 9*l.* 13*s.*, or 2*l.* 4*s.* per acre above that of the four years succeeding 1848. During these twenty years it is to be observed that the price of wheat as a general rule varied inversely as the quantity produced, in other words, a very good harvest was succeeded by lower prices than the average, a bad harvest was followed by higher prices, and the farmer was compensated in a great degree by a higher price for the deficiency of the harvest; thus in 1863 the best year of harvest of the period, the production was 41 per cent. in excess of the average, and the price fell to 40*s.* 1*d.* per quarter, the result to the farmer being 10*l.* -*s.* 6*d.* per acre; and in 1867 the harvest was the worst of the period, 26 per cent. below the average, but the price rose to 68*s.* 4*d.* per quarter, giving a result to the farmer of 8*l.* 17*s.* per acre.

In 1873 we observe a marked change in this relation between quantity and price, and it is obvious that some causes must have operated from that time to depress prices to a very marked degree. Unfortunately for the producers, the six years which followed 1873 have been years of very serious deficiency of production; as already shown the harvests have been 13 per cent. below the average. In lieu, however, of rising in proportion to this deficiency, the price of wheat has fallen somewhat lower than on the average of previous years. It has been 49*s.* 7*d.* per quarter, as compared with 55*s.* 5*d.*, the average of the previous six years of good harvests; the result, therefore, in product per acre has been an average for the six years of only 7*l.* 9*s.*, or exactly the average of the four years 1849-52, while the average of the last four years has been even lower, namely, 7*l.* 4*s.* 5*d.* per acre, or 2*l.* 8*s.* 6*d.* per acre below the average of the twenty years from 1853 to 1872. It is obvious from these figures that the reduced product per acre is due, not merely to the deficient quantity, but also to a fall of prices; and so far from the prices having risen in inverse proportion to the bad harvests, there has been a distinct tendency to fall in spite of the bad harvests.

From these figures it is easy to estimate how great has been the deficiency to the producers of wheat upon their average crops of the last six years. The present extent of wheat production in the United Kingdom is about 3,300,000 acres, and compared with the average of the previous twenty-four years, including the bad years succeeding 1849, the last six show a reduction of gross product of about 2*l.* per acre, equal to an annual reduced gross return of 6,600,000*l.* For the six years, then, the reduced return to the producers of this cereal has been 39,600,000*l.* It is quite clear, then, that the position of those farmers who rely upon wheat for

their main profit, and who have suffered most from the wet seasons of the last few years, has been very serious, and the prospect of another bad harvest must be most discouraging to them.

Before, however, we examine the causes of this, and speculate as to the future, let us look at the question from the point of view of the consumers. To the public who are consumers the failure of the harvest is a matter of as much regret as to the producers. It is the interest of all that the product should be plentiful. It cannot, however, be said to be equally the interest of all that the price of wheat should be high, or even that it should rise in proportion to the deficiency of harvest. If the increased price were paid wholly to the producers of this country, the money would at least remain here and be circulated again among the community; but as the greater part of the wheat consumed now comes from abroad, a rise in value not only raises the price to the home producer but also to the foreign producer, and the increased price paid by the consumer is so much loss to the country as a whole. For many years past the proportion of importations to the home production of wheat has been increasing. Thirty years ago we imported little more than one-fourth of our total consumption, during the last six years we have imported considerably more than the half our total wants. Comparing the last six years with the previous six years, it will be observed that the proportions of home growth and foreign imports have been reversed; in the first period we produced 12 million quarters and imported 10 million quarters; in the second period we produced 10 million quarters and imported 13 million quarters.

The following table will show at a glance how rapid has been the growth of imports, and how more and more this country is becoming dependent for its wheat supplies on other countries:—

Average Population, Production of Wheat, and Importation, for Periods of Six Years.

[000's omitted.]

Periods of Six Years.	1 Average Population of United Kingdom.	2 Average Acreage under Cultivation of Wheat in each Year.	3 Average Production of Wheat in each Year.	4 Average Importation of Wheat in Years succeeding Harvest.	5 Total Average Consumption of Wheat in each Year.
			Quarters.	Quarters.	Quarters.
1849-54.....	27,666,	4,267,	14,763,	4,207,	18,970,
'55-60.....	28,688,	3,836,	13,812,	5,873,	19,685,
'61-66.....	29,760,	3,625,	13,052,	7,760,	20,812,
'67-72.....	31,370,	3,562,	12,343,	9,667,	22,010,
'73-78.....	33,102,	3,313,	10,089,	13,050,	23,139,

[The table is constructed on the basis of Mr. Caird's table, showing the production of wheat per acre for each year since 1849; on

the trade returns from which Column 4 is arrived at; and from the agricultural returns, which give the acreage under wheat cultivation for the last few years; the acreage for the first three periods is estimated, after taking into account the importations, the requirements for consumption, and the known produce per acre.]

The price of wheat has averaged during the last six years 6s. per quarter less than the previous six years. The consumer, therefore, has been saved that much on each year on the total average consumption of 23 million quarters, or a sum of 6,900,000*l.* a-year, a saving nearly sufficient to pay for the excess importations, as compared with the previous six years. But this is not the whole of the case. If the price of wheat had risen during the last six years in inverse proportion to the deficiency of product, as it has already been pointed out was generally the case in the previous twenty years, it is easy to show that the average price during the six years would have been 6*zs.* 6*d.* per quarter, in lieu of 4*zs.* 6*d.*, a difference of 1*zs.* per quarter. This increase would have been paid by the consumer upon the average consumption during the six years of 23,139,000 quarters, making an increased charge to the community of about 15 million pounds in each year; and of this 6,550,000*l.* would have gone to the home producer in each year; and 8,450,000*l.* to the foreign producer. For the six years, therefore, the home producer would have gained 39 million pounds, and nearly 51 million pounds would have been paid away to the foreign producer, in excess of what was actually paid.

It is clear, therefore, that the country, as a whole, has very greatly benefited by the low price of wheat; and it is not too much to say that had this additional sum been paid away for wheat during the last few years of depression, in addition to proportional increased payments for other food supplies, the commercial depression would have been greatly aggravated.

The low price of food has unquestionably been the chief cause that the working classes have passed through the period of commercial depression with so little general suffering. It has also been the cause that one of the three great classes which make up the agricultural community, namely, the labourers, have been better off during the last six years than they have been during any period in the last century. Not only did they succeed, in 1872, in asserting a rise in wages, but their money wages have, owing to the low price of wheat, gone much further. A rise of 1*zs.* per quarter of wheat would have almost neutralised the rise of money wages.

A consideration of these facts will, I think, show how immensely the country gains by the low price of wheat, and that such gain is altogether out of proportion to any loss which may be incurred by the producers in this country, of that proportion of the consumption

which they are able to produce. It will also show how impossible must be the attempt to revert to any expedient for artificially raising the price of wheat in the interest of the home producers. Any arguments there may have been thirty years since in favour of such a course, are multiplied tenfold at the present time, when the proportion of imports to home produce is so greatly altered.

Let me now revert again to the table showing the gross product in money per acre of wheat. I have already pointed out that in the year 1873 there evidently came into operation causes which exercised a very powerful influence on the price of wheat, and which prevented its rise at a time when deficient harvests would have led us to expect a very considerable one. I do not think it is difficult to trace and determine one and the main of these causes. It appears to me to be very intimately connected with that which is the main cause of the commercial depression of the last few years. We know that between the years 1869-72 there was an extraordinary inflation of trade in America, due mainly to the enormous extension of railways in the Western States; this was in a great measure stimulated by reckless and unwise concessions of Congress, which gave away millions of acres of land to the companies who obtained concessions for their lines, and by reckless and unwise lending by capitalists and investors in this country and Germany. In four years not less than 17,000 miles of new railways were constructed. The installation of these new lines, and the consequent speculation, led to an enormous and unnatural development of the iron and coal industries in America, and to immense importations of iron rails from England; it also stimulated prices generally, and was a main cause of the inflation of that period.

The immediate result of this vast extension of the railway system in the Western States was to bring to market a great amount of corn already being grown in those districts, and which had hitherto been beyond the range of the English markets, and the effect of this doubtless began to be felt on the price of wheat in England about the year 1873.

Its next effect was to produce a reaction and collapse without parallel to any which we have experienced in the last thirty years. The collapse was mainly felt in the American States. In 1873 no less than 7,000 miles of railway became bankrupt and were sold up by their creditors. The iron manufactures which had been called into existence were involved in the collapse; nearly one-half of those in the States stopped work. The importation of iron from England fell to zero. The loss of capital engaged in these new railways and ironworks told in a hundred ways upon the commercial prosperity of the States, and indirectly, though by no means to the same extent, upon our own. Thousands of labourers were

thrown out of work in the manufacturing districts of America. Their imports fell off by 40,000,000*l.* a-year, or 32 per cent. There is no better illustration of the distress caused in America than the almost total cessation of emigration to it from this country. The intending emigrants soon learned that they had nothing to gain by transferring themselves across the Atlantic. There was greater difficulty in finding work in New York, Philadelphia, and even Chicago, than at Liverpool or in Ireland. In each of the years 1872 and 1873 the emigrants had numbered 230,000, in 1876 and 1877 there was an excess of returning emigrants.

What followed must have affected, even more powerfully, the prices of agricultural produce in this country. The great surplus of unemployed labour has during the last five years been transferred from the manufacturing districts and great towns in the Atlantic States to the new districts opened out by the railway extension of the previous years. The cultivation, therefore, of corn in these newly opened-out fields has increased at a ratio never before experienced. The new railways, constructed before there was population or trade to supply them, stimulated this new settlement by lowering their traffic rates to a minimum; the commercial depression operated upon the steam-carrying trade across the Atlantic in the same manner, and greatly lowered freights; coincident with this movement there has been a succession of abundant harvests in America, while this country was suffering from such deficient harvests.

So great a movement in the direction of increased cultivation of the surface of the earth has probably never been yet experienced in so short a period, nor has there ever been so rapid and great a reduction of the cost of transit, both by land and sea.

The following table taken from official returns shows the growth of production of wheat alone in the United States:—

[000's omitted.]

	1849.	1859.	1869.	1877.	1878.
	Bshls.	Bshls.	Bshls.	Bshls.	Bshls.
Atlantic States	51,657,	53,294,	57,476,	64,344,	65,000,
Central States.....	43,522,	94,458,	140,877,	147,890,	150,000,
Trans - Mississippi } States	5,306,	25,352,	89,392,	152,860,	215,000,
Total	100,485,	173,104,	287,745,	365,094,	420,000,

The aggregate production of wheat has increased from 100 millions of bushels in 1849 to 365 millions in 1877, and 420 millions in 1878, and the production per head of the population, notwithstanding that the population has nearly doubled in

the interval, has increased from 4·33 to 7·87. Not less interesting is the relative increase in different sections of the country. In 1849 the production beyond the Mississippi was insignificant. The production of the Atlantic and the Central States was not far from equal, each about 50 million bushels. The production of the Atlantic States has increased but very little in the thirty succeeding years; it is now only 64 million bushels. The production of the Central States doubled in the decade ending 1859, and increased again by 50 per cent. in the decade ending 1869, while the trans-Mississippi production, which amounted to 25 millions in 1859, rose to 90 millions in 1869, and to 215 millions in 1878; the whole increase, therefore, in the last seven years has been in the States beyond the Mississippi.

From 1870 to 1878 the area under cultivation of wheat in the States increased from 19 millions of acres to 30 millions, and of maize from 38 millions to 50 millions; and the exports of wheat alone increased in ten years from 50 millions of bushels to 90 millions, of which this country had taken more than half. Of the total importations of wheat to this country the production imported from the United States has increased from 26 per cent. for the six years ending 1872, to 44 per cent. for the last six years, or, including Canada, about 50 per cent. For the twelve years ending 1866, the proportion was 35 per cent. The figures show that the relative capacity of America for supplying this country with wheat had greatly fallen off during the six years preceding 1873, but since then has enormously increased.

The excess production of the American States and Canada beyond the wants of their own population is at the present time sufficient, in average harvests on both sides of the Atlantic, to supply the whole excess wants of this country; and the actual acreage under wheat cultivation is nearly ten times the extent under similar cultivation in this country.

In view of these facts, who can be surprised that the price of wheat in this country should have been so profoundly affected? The result of the movement in the States during the last eight years, of the vast extension of cultivation, combined with the cheapening of the cost of transit, has been almost to annihilate the distance between the two countries, and to subordinate the production in this country to the vastly greater production on the other side of the Atlantic. It has rendered us comparatively indifferent, so far as our interests as consumers are concerned, whether we have good or bad harvests in this country, and a complete command over the markets here has been given to the vastly greater production of the far West.

Is it then to follow that the cultivation of wheat in this

country is, in the future, to become impossible, because unprofitable? Is the price to be so permanently reduced as to prevent its cultivation upon any but the very best soils? We are not I think justified in coming to any such conclusion. It must be recollected that the last six years have been years of most exceptionally low production in this country; the competition of America has been much more felt in the bad seasons than in the good seasons; it has had the effect of preventing the rise of price in bad seasons. We can scarcely as yet estimate its effect upon the price in average seasons or when harvests are above the average in this country. The bad harvests here have been balanced by exceptionally good harvests in the States; we have yet to learn what may be the result upon prices here of indifferent harvests in America. A diminished production of one bushel to the acre in this country results in a loss of less than half-a-million of quarters; a reduction to the same amount in the United States will produce an aggregate loss of three and a-half million quarters, or one-third of her exporting power. A general bad harvest, therefore, may even now materially interfere with her exports. In 1859, and again in 1865 and 1866, the exports from America were reduced to very small amounts by bad harvests, after having been exceptionally large, and there may be similar variations in the future. It is probable also that the effect of the recent bad seasons and low prices will be to reduce still further the acreage of wheat cultivation in this country. In future, therefore, we must look for an ever-increasing requirement from abroad for our wheat consumption. An average harvest in this country will produce not more than eleven million quarters, leaving twelve million for imports. A harvest 20 per cent. above the average will still necessitate the importation of ten millions. It is quite possible, and indeed probable, that a bad harvest in the States, coincident with a good harvest here, may raise the price of wheat so as to give a large profit to the farmer. There are many questions also affecting the future production in America and the future balance remaining for exportation which have to be considered. The increase of population there is rapid; new districts become quickly peopled; States which a few years ago were large exporters, are now producing no more than sufficient for their own consumption; others are become importers, and every year the centre line of wheat production is being carried farther to the westward. A general revival of trade will probably increase the traffic rates of the Western railways and the Atlantic freights. These and many other causes may in future tend to raise the average price of wheat and other agricultural produce in the States.

If I were to venture a prediction on so difficult and obscure a

question, I would incline to the opinion that wheat has during the past year reached its lowest point; that we have felt the maximum of the effect of the recent great extension of corn production in the far West; that with the revival of trade, the increase of population both here and in the States, and the tendency to reduced cultivation of wheat in this country, there will be a rise in the price of wheat; and that, coupled with better harvests in this country, or, at least, a return to average harvests, we may find the product to the farmer in money such that the difference as compared with the past is capable of adjustment by a comparatively slight reduction of rent and wages.

The business of farmers, especially in this country, where it is separated from the ownership of land, and is connected with the land only by contracts of short date, is one which cannot be carried on without such a rate of profit as will induce capital to embark in it. It is certain, therefore, that such an adjustment of profits, rents, and wages must be made as to enable the business to be carried on, and it is probable that this adjustment will be made before the Royal Commission recently appointed can conclude its labours.

It may be worth while to point out that the competition of the far West has told upon other lands much nearer to it than our own country. The farming interest of the New England States, and even of some of the other Atlantic States, has been much affected by it during the last few years. The value of land in these States, remote from the larger towns, has been much reduced, and large numbers of farmers from New England have been induced to leave their homes and settle in the new opened-out district in the West. Their place has been taken in part by Irishmen and in part by Frenchmen from Canada, who are content to farm in a more humble manner, and who can get a living by laborious and minute attention which their predecessors disdained to give to the land. At the same time a great change has come over the manufacturing industry of New England. It is not many years ago that its factories were mainly supplied by the sons and daughters of the New England farmers of the true Anglo-Saxon descent. This class has now all but disappeared; the factory workers are now Irishmen or Frenchmen, and form a true manufacturing population. The true New Englander is rarely found there, except in a position of trust as overlooker or manager. The change which has taken place, and the depreciation in the value of land, has not affected the total value of property in New England. The low price of food has been a great benefit to the manufacturing industry, and the aggregate wealth of these States never was greater than at the present time.

If the competition of the great corn-fields of the far West has thus told upon States so near at hand, it is to be expected that

some of its effects would be felt in this country. Although the position of the farming interest for the twenty years preceding 1873 was satisfactory and fairly prosperous, yet it was certainly not progressive. The cultivation of wheat has gradually diminished, and the breeding and feeding of cattle has been substituted for it; the dependence of this country upon foreign produce for its food has every year become greater; the number of persons employed in agriculture has remained stationary, and their proportion to the rest of the population has been continually diminished. The whole increase of the population during the last forty years has been absorbed in other pursuits than agriculture. In 1831, 28 per cent. of the population of England and Wales was occupied in the business of agriculture; the proportion is now less than one-tenth; and great as still is the importance of the agricultural interest as compared with any other, its relative importance to the whole manufacturing and commercial interests of this country is greatly changed. That, notwithstanding this, the wealth of the country has increased by enormous leaps and bounds in the interval is indisputable, and especially was this the case in the few years preceding 1873. That we have been able to provide for a population increasing by about three millions in every ten years, without any increase of territory, and with a somewhat reduced agricultural industry; that we have been able to turn the tide of pauperism, and to reduce it considerably as compared with the past, is a most striking fact, and strong testimony to the soundness of our general system. It may be that the enormous agricultural development in America will drive us further on the same road; but that it will permanently injure the economic condition of this country as a whole is not to be believed.

If, then, I am right in my explanation of the agricultural depression, it may be connected not remotely with the depression which has weighed so heavily upon commerce and manufactures also during the last five years. Both are probably due in the main to causes operating over a great area and over a long period, and are indications of the flow of the great tide of population and cultivation advancing over the great plains of America. The collapse of credit in 1873, and the consequent discredit and depression, has been much more felt on the other side of the Atlantic than on this. The imports to the States fell off enormously; the investment there of foreign capital wholly ceased. In this country we have felt severely the temporary loss of our largest customer for our exports;* but our other customers in every part of the world have made up for the bulk of our exports, though not for their value.

I am confident, however, it will be found, on making a com-

* Our exports to the United States fell from an average of 36 millions for the three years ending 1873, to 16 millions for the last three years.

parison between this country and others, that we have passed through the period of depression with infinitely less suffering to the bulk of the people, and with less real loss of capital, than in any other part of the world—excepting perhaps France, which has been saved by the extraordinary thrift of her working population; and that free imports and consequent low prices have saved the labouring classes from what would otherwise have been a period of far greater distress to them. Already there are symptoms of revival in that quarter from whence the principal cause of the depression issued. All accounts from America testify to the improved condition of trade, to the fact that the immense extension of agriculture is producing its natural effect in reviving a demand for manufacturing products which her own workshops will be soon unable to supply. With reviving trade and renewed confidence in America, the investment of capital will again flow towards it, and we may again confidently expect a renewal of our export trade. It is impossible the people of the United States can long continue to supply the world with food and take nothing in return for it. On the other hand, all past experience shows that in spite of high duties and protection rates a great import trade may exist, and may find the means of overcoming all the impediments of hostile tariffs. Within the last few weeks we have heard of an order for 20,000 tons of rails, to be manufactured in this town, and to be delivered at New York, where the duty payable will be more than the cost price at Sheffield. The trade returns of the last few months likewise show that in every item enumerated there is a great increase of exports to America. As the United States, therefore, have been the main cause of the past depression, so they may in the future be the main cause of a reaction; and the reaction which will tell first in trade and manufactures, will certainly later reach the agricultural interest.

It appears to me, then, that it would be a most useless waste of time and energy to expend efforts in trying to reverse the commercial system established by Sir Robert Peel in 1846, or in making inquiries with a view to a return to exploded fallacies and obsolete systems; but it is a time, when attention having been so much directed to the condition of agriculture, we may with great advantage inquire whether the conditions under which it is carried on in this country are such as to attract and encourage to the utmost the application of capital and labour to the land; whether a system of tenure which seems calculated to forbid the combination of ownership and occupation, to prevent security for improvements effected by the occupier, and to accumulate land in the hands of persons who are frequently unable to afford capital for its improvement, is the best suited for the development of agricultural industry. Although changes in such a system may not be fraught with immediate remedies for present depression, and may not affect

the price of produce, yet they may tend ultimately to place the cultivators in a better position to meet the varying conditions of the future; which in agriculture, as in other trades, must be expected to present alternate periods of prosperity and loss.

APPENDIX.

Year of Harvest.	Production of Wheat per Acre, as compared with Standard of 100 per Acre.	Production per Acre in Quarters of Wheat.	Average Price of Wheat during Twelve Months succeeding Harvest.	Average Crop Produce per Acre for Wheat Represented in Money. Excluding Value of Straw.
			<i>s. d.</i>	<i>£ s. d.</i>
1849.....	123	4·3	40 4	8 13 5
'50.....	102	3·6	39 10	7 3 5
'51.....	110	3·9	39 7	7 14 4
'52.....	79	2·8	44 7	6 4 10
'53.....	71	2·5	72 11	9 2 3
'54.....	127	4·4	70 —	15 8 —
Avg. for 6 yrs.	102	3·6	51 —	9 1 —
1855.....	96	3·4	73 11	12 11 4
'56.....	96	3·4	60 1	10 4 3
'57.....	124	4·3	47 8	10 5 0
'58.....	116	4·1	43 9	8 14 4
'59.....	92	3·2	48 3	7 14 5
'60.....	78	2·7	55 3	7 9 2
Avg. for 6 yrs.	100	3·5	54 10	9 7 —
1861.....	92	3·2	58 1	9 5 10
'62.....	108	3·8	47 7	9 — 10
'63.....	141	4·9	40 11	10 — 6
'64.....	127	4·4	40 —	8 14 —
'65.....	110	3·9	46 6	9 1 4
'66.....	90	3·2	60 4	8 13 1
Avg. for 6 yrs.	111	3·9	49 —	9 2 —
1867.....	74	2·6	68 4	8 17 8
'68.....	126	4·3	49 11	10 14 8
'69.....	102	3·6	46 2	8 6 2
'70.....	112	3·9	54 2	10 11 3
'71.....	90	3·2	56 7	9 1 1
'72.....	92	3·2	57 3	9 3 2
Avg. for 6 yrs.	100	3·5	55 5	9 9 —
1873.....	80	2·8	61 3	8 11 6
'74.....	106	3·7	44 7	8 4 11
'75.....	78	2·7	46 9	6 4 2
'76.....	76	2·7	54 8	7 7 7
'77.....	74	2·6	50 10	6 12 2
'78.....	108	3·8	40 5	7 13 7
Avg. for 6 yrs.	87	3·2	49 7	7 9 —

Note.—The figures in Column 2 are taken from Mr. Caird's table in his work on the Landed Interest.

MISCELLANEA.

CONTENTS :

	PAGE		PAGE
I.—Statistics in Parliament	784	VI.—Influence of Prices on the	
II.—The Agricultural Returns of		Foreign Trade of France	848
1879	790	VII.—Statistical Return of the	
III.—The Crops of 1879	808	Australasian Colonies....	858
IV.—The Increase in the Number		VIII.—Notes on some of the Ad-	
of Banks and Branches	817	ditions to the Library....	860
V.—The Conversion of Unlimited		IX.—Additions to the Library	
Banks into Limited	844	during the Quarter.....	873

I.—*Statistics in Parliament.*

At the last Anniversary Meeting of the Statistical Society, Mr. Newmarch took occasion, on seconding the resolution for the adoption of the Annual Report of the Council, to observe that “there were few things more remarkable than the alteration that had taken place during the last twenty-five or thirty years in the way in which public questions were discussed, especially questions of an economical character. No one was now listened to unless he could discuss such questions on grounds of fact and careful statistical observation, and that was precisely one of the changes which the Society was established nearly fifty years ago for the purpose of creating.” A few days after these words were spoken, an excellent illustration of the employment of statistics in public debate was afforded by two of the speeches during the discussion which arose in the House of Commons upon Mr. Chaplin moving for the appointment of a Royal Commission to inquire into the causes of agricultural depression. That discussion is reported in the *Times* of the 5th July. The following extracts have been taken from that paper. Space would not permit the transference of the report *in extenso* to these pages; therefore, only those passages of a direct statistical character to be found in the two speeches are printed below. Of course this is no attempt at a summary of the arguments used, but merely a citation of the statistics put forward by the speakers.

In the speech of Mr. Chaplin, on moving the resolution, these passages occur:—

“He asked honourable members to look for a moment to the corn and meat producing countries of the United States of America. There were in America 32 million acres growing wheat and producing 420 million bushels, as against 3 million acres producing about, he believed, 90 million bushels in our own country. Again, he found there were in America 33 million cattle, 38 million sheep, and 34 million pigs, as against 5 million cattle, 28 million sheep, and 2 million pigs in Great Britain and Ireland. . . . It might be alleged that the present depression of agriculture was in no way owing to the prices complained of,

because, as Mr. Caird wrote in the *Times*, the prices of to-day were not lower than they had been before. He was not prepared to admit that the returns could be strictly relied on, but, suppose they were, they would prove nothing, because the cost of production in these days was very much greater than it was before. There had been a great increase in rates, of which they had all reason to complain. There had been a still greater increase in the cost of labour; and that was owing in no small degree to the Education Acts, by which the farmer had been deprived of the valuable boy labour which he used to employ, and by which alone the land was cleared of weeds and maintained in a fertile condition. Another reason was that the prices of almost all commodities were higher than formerly, and that only meant that gold was more plentiful. If you turned to the years 1849, 1850, 1851, and 1852, and again to the years 1863, 1864, and 1865, when the prices of wheat were at their lowest, when they averaged for those years only 41s. 7d. per quarter, you would find that the importation of wheat into the country for the same years averaged only 20 million cwts., as against 50 million cwts. in 1878. From this he drew the conclusion that our crop in those years was not a short one: but whereas in those years a short crop was, at all events to a certain extent, accompanied by an increase in price, we had now short crops and short prices—a new experience, which had been reserved for the years 1878 and 1879. He did not scruple to say that in his opinion, if the prices farmers had lately been receiving continued or if they fell, as it was threatened they would fall, even below their present level, agriculture in England would not be of long duration. . . . It was not a question of class; it was a national question of the first and of the highest importance. The aggregate capital of the whole country was computed at 8,500 millions of money, of which 2,700 millions was credited to agriculture—in other words, nearly one-third of the whole, and three times as much, he believed, as any one other industry in the country could claim. Then the population dependent directly and indirectly upon it could not be computed at less than 10 or 12 millions of people. He arrived at this figure by taking the whole population of the agricultural counties of the United Kingdom, exclusive of the towns. Most of the population of the towns, however, he thought, might fairly be included, in which case the number of people dependent upon agriculture would be nearer 15 or 16 millions. It was impossible not to perceive that the income and fortunes of all the tradesmen, shopkeepers, men of business, mechanics, and others, as well as those whom they employed, residing in the towns and what might be called the rural capitals of agricultural counties, were intimately bound up and connected with the prosperity of agriculture. . . .

“There certainly would be no harvests at all unless it paid to produce them; and whether it would pay or not would depend upon the question how far America would be able in future to undersell us in food in our own country. At present, that was to a certain extent a matter of speculation. It depended on a variety of considerations, on which we scarcely possessed enough information

to form an opinion. For instance, there was the question of freight. Would freights be higher or lower in future than they were now? Opinions differed on that point. He had himself heard both views maintained. Then, again, there was the question of that great displacement of labour which had occurred in the United States, and which had transferred so many hands from the workshops of the East to the prairies of the West. Would those hands remain there, or would they return to their old occupations? All those were questions on which we wanted information. What we did know at present was the reverse of encouraging. It was this: It had ceased for a long time to pay to grow corn in this country alone, but there was stock to fall back on, and meat and corn taken together had hitherto paid a very fair profit to the English producer. But now English farmers had to contend with a new trade in meat from America, which had attained the most alarming proportions. He spoke, of course, from the agricultural producer's point of view. The rate of increase in this trade had been most rapid. There were imported 299 cattle in 1875, 380 in 1876, 11,523 in 1877, 68,903 in 1878, and 20,733 in the first five months of the present year, in spite of its being in winter, and in spite of the recent Orders in Council, ordering slaughter at the port of debarcation."

Mr. Thomas Brassey seconded the motion. There are but few parts of his speech which do not depend upon statistics:—

" It could not be said that English agriculture, under the conditions which had until lately prevailed, had been unsuccessful or unskilful. M. Léonce de Lavergne, in his able work on English agriculture, had done full justice to the ability and enterprise of our farmers. Our land, though on the whole inferior, had yielded more wheat per acre than that of any other country. Taking sheep and cattle together, more animals were raised for the butcher in England than in any part of the continent. The practical skill of the British farmer had been conspicuous in the management of sheep. The improvements in the breed were commenced in Leicestershire by Mr. Bakewell, and the results in the increased production of mutton were signally illustrated by M. Lavergne. He said that assuming that France and the United Kingdom each possessed an equal number of sheep, which number he took at 35 millions, it being actually $32\frac{1}{2}$ millions, each country would obtain from its flocks an equal quantity of wool, but the weight of mutton, assuming eight million sheep to be slaughtered annually, would be in France 39,600,000, in England 99 million stone. But the United States had lately poured into our markets such copious and increasing supplies of wheat and animal food, that it had become evident that our old-established systems of cultivation, however perfected they might be by the expenditure of the capital of the landlord and by the skill of the occupying tenantry, must undergo a very serious change. It was most important, therefore, that the landed interest in this country should be informed, through the inquiries of the proposed Commission, as to the probable course of trade with the United States in agricultural produce; what were the articles in which it was hopeless to undertake a competition with the superior natural resources of the great continent of

the West; what were the articles in which our soil and climate and vicinity to our markets gave us the greatest advantage; what steps should be taken to relieve a landowner, whose resources were exhausted, of the responsibility of ownership; whether our arable lands were rented too high; what additional securities should be given to tenants; and whether the usual conditions in leases were too stringent. On all these subjects they might look for valuable suggestions from the report of the Commission."

"It was shown in the return which had been obtained by the honourable member for East Retford, that while the price of wheat had been kept down by extensive foreign importations, a great and sustained advance had occurred in the price of meat. Mr. Caird's analysis of the total value of the home and foreign agricultural produce showed very clearly where the British farmer was best protected by advantages of situation against foreign competition. Of wheat, cheese, and butter, we imported a quantity about equal to our home production. Our main supplies of wool were from abroad. Our chief supply of barley, oats, and beans was drawn from home. In a few important articles, however, our home farmers had an undisputed monopoly, and these items included potatoes, of which the annual production was valued at 16,650,000*l.* sterling; milk, 26 millions sterling; hay, 16 millions; and straw for town consumption, 6 millions. Already the agricultural interest had come to depend, not on wheat, but on meat, butter, and hay, which still fetched a good price. Turning from wheat to animal food, they found that the importations from abroad had increased in a still more rapid ratio. According to Mr. Caird, the value of our importations of animal food had risen in the period 1857-76 from 7 millions to 36 millions. It seemed probable that the trade would be prosecuted with ever increasing activity. According to a calculation published by Mr. Clarke in the *Journal of the Royal Agricultural Society*, the average meat supply of the United Kingdom in 1876 was in the following proportions:—Meat from home animals, 79 per cent.; meat from imported live animals, 6¼ per cent.; imported fresh meat, 2; and imported salt meat, 13 per cent. The importations of fresh meat were doubled in 1877. It was a very important subject for inquiry by the proposed Commission, whether that importation was likely to continue and to increase in the same ratio as it had lately done. The answer must depend on the cost of rearing stock in the United States, on the rates of freight, and on the extent of loss by deterioration in transit. First, as to the cost of rearing cattle. He had lately been in correspondence with some friends in Boston, from whom he had derived much interesting information. The business of the herdsman in the far West was conducted on a vast scale. There were many herdsmen owning herds of 75,000 head. They fed their cattle on the eastern slope of the Rocky Mountains. The country was very dry, and could not, therefore, be cultivated. The herdsmen held the land under the United States Government, and let their cattle roam over a vast extent of country, where they fed all the winter out of doors. They were making every effort to improve the quality of their stock, and meanwhile filled up their

herds with large numbers of cattle from Texas. He was informed that the loss of cows was only about 1 per cent. and the loss of steers about $\frac{1}{2}$ per cent. annually. It cost six dollars, or 25s., to bring into the world and raise a four-year-old steer. Such an animal was worth at Chicago from 35 to 45 dollars, and the cost of transport to Chicago was only eight dollars. At the present prices the herdsmen realised profits of from 25 to 40 per cent. He had stated the facts as to the cost of rearing cattle in the United States at the present time from a source of information on which he could very confidently rely; but it was essential for the guidance of the agricultural interest that a more extended inquiry should be made by the instrumentality of a Royal Commission. In considering the expediency of laying down arable land in pasture, it was important to ascertain whether the importation of American cattle was likely to continue and to increase at anything like the present rate of development. It was said that beasts were becoming scarce in Canada. Railways would not long continue to carry cattle at the same price which they had been willing to accept in a time of severe commercial depression. It was a question again whether the United States Government would not levy a charge for pasturage on the public lands when the trade had been developed and was known to be lucrative to the keepers of stock. Even a charge of 1s. an acre would materially affect the cost of breeding and rearing cattle which roamed over such vast territories. The effect of any such charge might be the more seriously felt because the Americans could not put an animal on the market in less than from four to five years. A grass-fed animal could not be fit for sale in a shorter period. He thought it was a question for the Royal Commission to examine whether it would not be wise policy for the British farmer to combine with rather than compete with the American herdsman, and to import, to some extent, the lean stock of America to be fattened on our more luxurious pastures. Having referred to the expenses of rearing cattle in the United States, he turned to the cost of transport to this country. On this Mr. Caird remarked:—‘Under any circumstances the English producer has the advantage of at least 1d. a pound, in the cost and risk of transport, against his transatlantic competitor. It is an advantage equal to 4l. on an average ox. Of this natural advantage nothing can deprive him, and with this he may rest content.’ It was important, however, to observe that the cost of transporting live animals across the Atlantic had been very rapidly reduced since the publication of Mr. Caird’s book. He was informed by Mr. Beazley, the well-known shipowner of Liverpool, that at first steamers obtained freights of about 6l. per head. The rates had gradually been reduced, until now they were only 2l. 10s. to 3l. per head. He had received from Liverpool further particulars which showed that the loss of cattle during the voyage was being rapidly diminished by the improved appliances which were being perfected by experience. The following figures gave the importation of cattle into Liverpool from the United States during the past year:—In February, out of 4,828 oxen shipped, 468 were lost on the passage; of 1,277 sheep, 120 died. In March the importation was reduced by 2,000 head;

1,829 oxen were shipped, but only 9 lost; 1,236 pigs were shipped and 75 lost; 1,454 sheep were embarked and 143 lost. In April, 1,993 oxen were shipped, and only 8 lost of sheep the number shipped was 8,818, and the loss 164. The number of pigs shipped was 2,925, and the loss 447. In May there was a great increase in the numbers of cattle landed in Liverpool from the United States, and the loss was comparatively small; there were shipped 6,281 head of cattle, of which 187 were lost; of sheep, 13,064 were shipped, and 217 lost; of pigs, 5,834 were shipped, and 418 lost. With regard to the prices realised for the imported cattle, Mr. Beazley had furnished him with the following details:

“‘They find it,’ he said, ‘better to kill immediately after arrival, as the animals are shipped fat and in good condition, and, as a rule, in the regular traders fitted for the purpose arrive in fair condition.’ Mr. Beazley also informed him that 422 head from Montreal, not in particularly good condition, sold at an average of 22*l.* 8*s.*; 349 head from Montreal, in better condition, sold at an average of 24*l.* 2*s.*; 6 superior beasts fetched 31*l.* per head; 440 beasts sold in London on 2nd June, at an average of 24*l.* 1*s.*, *ex* ‘City of London.’ That steamer only lost 6 out of 600. We wanted information as to what articles of produce it was useless to grow in competition with the foreign producer; but might we not also learn something from their methods of management and cultivation? As an illustration he would specially refer to the manufacture of cheese. The total quantity of cheese manufactured in the United Kingdom was estimated at 2,000,000 cwts.; the importations in 1876 amounted to 1,500,000 cwts. The value of the annual home product was estimated by Mr. Clarke, in a recent paper in the *Agricultural Society’s Journal*, at 3*l.* 15*s.* per cwt., or a total of 8,370,000*l.* The finer qualities were produced in only a small proportion of the dairies of England. For cheese of superior quality excellent prices were still obtainable; but he was informed by an agricultural relative in Cheshire that large quantities of the cheese made last year had not fetched more than 30*s.* or 40*s.* per 120 lb.; while the best qualities fetched from 70*s.* to 80*s.* The same experiences had been obtained in all parts of the country. The question, therefore, that we had to consider, and which he should like to see examined by the Royal Commission, was whether the acreage of farms in the dairy counties had been judiciously apportioned, and whether the farmers themselves had anything to learn from the processes of manufacture adopted in the United States. The increase in the manufacture of butter and cheese in the Eastern States of America had been most remarkable. Mr. Victor Drummond, in his recent report, gave the value of the cows in the different States at 62,000,000*l.* sterling, and the value of the cheese and butter which they produced at an equal amount. The production had increased 33 per cent. within the past year. The exportations of 1878 paid more than a quarter of a million sterling for freight to Europe. The introduction of what was called the factory system had had the effect of materially increasing the production. The Americans worked on the co-operative plan. All the farms within a radius of perhaps 4 miles sent their milk to the same dairy,

where the production of cheese was carried on, even by small occupiers, on the most extensive scale, and upon the most scientific and economical system. Mr. Drummond gave details as to the processes of making butter and the milking of cows by a mechanical process, which deserved the attentive study of our own farmers; and he looked to the report of the Royal Commission to bring its discoveries in a prominent manner under their notice."

Statistics were brought into court by other speakers in this debate, but the most apt examples of their employment are printed above.

F. P.

II.—*Agricultural Returns for 1879.*

THE following Report of Mr. R. Giffen to the Secretary of the Board of Trade, with summary tables, is given in continuation of a series of similar notices for previous years:—

"I have the honour to submit the Agricultural Returns of Great Britain for the year 1879, the data for which were collected, as in previous years, by officers of the inland revenue department in Great Britain, and by officers under the direction of the local authorities in the Isle of Man and the Channel Islands.

"As in 1877 and 1878, the returns have been again collected on the 4th of June, the change to that date, it will be recollected, having been from the 24th or 25th of the month. The usual summary of the returns was issued to the newspapers on the 19th of August, a day sooner than in 1878, the present complete tables and report being also ready at the end of September, as was the case last year.

"It is satisfactory to find that the late trying seasons and depression in agriculture have not impaired the willingness of the farmers to take trouble in supplying the necessary information to the collectors. In one or two counties the collectors state that they found greater difficulty than in former years in getting the schedules filled in and returned to them, but this is quite an exception to the general rule of increased willingness on the part of farmers to give information. As the result it is found that this year the acreage of land estimated in default of returns was 1,612,143 acres only, as compared with 1,768,703 in 1878, and 2,036,931 in 1877.

"In Great Britain returns were this year obtained from 554,823 occupiers, and 5,222 owners of live stock only, the former number showing a decrease of 1,986, and the latter being 19 more than in 1878. In certain counties the variations between the number of occupiers of 1878 and the number in the present year are not inconsiderable, and the decrease in some cases is stated to be caused by the number of farms now in the hands of the owners owing to the depression, and returned by the owner as one holding. In other cases, the diminution of small holdings by amalgamation or absorption into larger holdings is noticed, and in others again, though less frequently, the contrary process; but even allowing for the

somewhat greater variations in the present year, it may be stated generally that there has been little change in the average size of farms in recent years so far as can be judged from these returns. As, however, every effort is made to save trouble to the occupiers by allowing them to make one or more returns as they please for the land they hold, there are often casual differences according as the returns are made in one or another parish.

“In the summary of the return annexed (see Table A), columns are added as usual to show for Ireland and for the whole of the United Kingdom the particulars corresponding to those in the return for Great Britain; the figures for Ireland having been supplied to this department by the courtesy of the Registrar-General for that country. As has been mentioned in former reports, the returns in Great Britain are obtained from all occupiers of not less than a quarter of an acre of land, and also from owners of live stock who do not occupy land, while cottagers’ pigs are excluded as well as pigs kept in towns; but a somewhat different plan, it appears, is followed in Ireland, where the enumerators enter the particulars themselves, after personally consulting the occupiers. In that country, all holdings, however small, are included, and even garden crops are entered in the schedules; variations which it is useful to remember when the agricultural statistics of Great Britain and Ireland are compared. Subject to these qualifications, the following remarks are offered on the returns now presented as well as on the comparative figures for Ireland and for the United Kingdom:

“The total quantity of land returned in 1879 as under all kinds of crops, bare fallow and grass, amounted, for Great Britain, to 31,976,000 acres. For Ireland the returns obtained by the Registrar-General show a total of 15,336,000 acres, and for the Isle of Man and Channel Islands the totals are respectively 94,000 acres and 31,000 acres. Thus for the whole of the United Kingdom the cultivated area was in 1879, 47,437,000 acres, exclusive of heath and mountain pasture land, and of woods and plantations.

“In Great Britain the area returned as under cultivation has increased by 121,000 acres since 1878, and by 264,000 acres since 1877, and the total increase in the ten years since 1869 is no less than 1,637,000 acres, or about the same area as the whole of Devonshire. Of this increase rather more than two-thirds or 1,134,000 acres was in England, 228,000 acres in Wales, and 275,000 acres in Scotland. As I have remarked in previous reports, a great part of this increased acreage must be taken to be caused by more correct returns, more use being made of the rate books than formerly, but a considerable portion is really land that is being gradually reclaimed from mountain, moor, or bog, several instances being specially noticed by the Inland Revenue officers as having occurred during the past year. A few cases are also noted in the north of England this year of land taken for building near towns having been given up again to cultivation for a time on account of depressed trade.

“In Ireland the cultivated area shows a slight decrease of 9,000 acres, the decrease in 1878 having been 82,000 acres, and in 1877 nearly 300,000 acres. As explained at the time, this large falling

off was chiefly due to an alteration in the headings of the schedules by which the 'barren mountain land' was completely excluded from 'grass,' in which some portion with stock upon it had been previously erroneously included. In mountainous districts and in the neighbourhood of heath and moor land, there is always some difficulty in deciding what land should be included as pasture. This difficulty is felt in Great Britain as well as in Ireland, and every endeavour is made to secure accuracy by tracing out large differences to the particular parishes in which they occur, and obtaining through the Inland Revenue Office explanations from their local officers as to the reason of the discrepancy.

" Looking at the details of the various crops, I have to notice with regard to corn crops that the area under wheat in Great Britain in 1879 was 2,890,000 acres, being a decrease of 328,000 acres from the previous year, or more than 11 per cent. In Ireland there was a fractional increase for the year, and the total area in the United Kingdom was 3,056,000 acres, which shows a decrease of 326,000 acres, or nearly 10 per cent. from 1878, still a large falling off, though not so large in proportion as for Great Britain alone. The low price of wheat and an unfavourable seed time are stated by the collecting officers as the chief reasons for this large falling off, the former cause especially having induced farmers to grow barley instead. The wheat crop in the United Kingdom has now decreased by nearly a million acres or a fourth of its area since 1869, when 3,982,000 acres were under wheat. The decrease in Great Britain alone is from 3,688,000, to 2,890,000 or 798,000 acres.

" As I have just mentioned, barley has partly taken the place of wheat, being this year sown on 2,932,000 acres, an increase of 209,000 acres and nearly 8 per cent. over 1878, and the largest area sown with that crop since the agricultural returns were first obtained in 1867. Oats covered 3,998,000 acres in the United Kingdom, showing a decrease of 126,000 acres, or 3 per cent. from 1878. This crop has declined steadily in area during the last ten years, having amounted to nearly four and a half million acres in 1869. The decrease, however, has been almost exclusively in Ireland. The large importations of maize which are shown in Table No. 23 of the returns to have taken place of late years have doubtless competed very largely with the oat crop, and therefore tended to diminish the breadth sown.

" Rye was sown on 58,000 acres as compared with 71,000 acres last year, and beans and peas show little variation from the figures of 1878 either in Great Britain or Ireland.

" Summing up the figures as to the corn crops, we find that the total acreage under corn crops in the United Kingdom amounted in 1879 to 10,777,000 acres, a decrease of 2 per cent. from last year, and of more than 10 per cent. from 1869, when corn crops covered no less than twelve million acres. In Great Britain alone the decrease is from 9,168,000 acres in 1878 to 8,985,000 in 1879, or also about 2 per cent.; but in the last ten years the decrease is less in proportion than for the United Kingdom. As will be seen from Table D annexed, the acreage under corn crops in Great Britain in 1870 was 9,548,000 acres, so that the figure of 8,985,000 acres

in the present year shows a decrease of 563,000 acres, or about 6 per cent. only. The decrease in corn crops in the United Kingdom has thus been most marked in Ireland.

"Turning to the green crops, we find there is an increase of 33,000 acres planted with potatoes in Great Britain, 541,000 acres being this year planted—a larger area than in any year since 1872—but in Ireland there is a slight decline from the reduced figures of late years. Turnips and swedes in Great Britain have decreased from 2,031,000 acres to 2,017,000 acres, owing it is stated to the wet weather interfering with the sowing, thus increasing the quantity of uncropped land. Carrots and cabbage, &c., in Great Britain show little variation, but vetches, lucerne, and other green crops, were grown on 448,000 acres as compared with 420,000 acres last year. The growing of sugar beet which comes under this heading is reported by the collecting officers in Norfolk to have been discontinued in that county. Altogether the acreage of green crops in Great Britain was 3,554,000, an increase of 63,000 acres, but showing little change from the average of the last six years.

"The officers in parts of Berks and Bucks report the cultivation of flax to have begun in those counties, but the small acreage in Great Britain under flax shows on the whole a further decrease. In Ireland, however, there were 128,000 acres of flax; an increase of 16,000 acres from 1878. The acreage of hops in Great Britain has declined from 72,000 to 68,000, owing it is thought by the collectors to low prices and the recent bad seasons. A table has this year been added in the return to show in greater detail than in counties the districts in which the hops are grown.

"Bare fallow in Great Britain has increased from 632,000 acres to 721,000 acres, chiefly as I have before remarked on account of the wet spring which prevented the sowing of turnips and other crops, and more land is so returned than in any year since 1869.

"Clover and rotation grasses, it will be observed, show a very considerable decrease, amounting to 100,000 acres in Great Britain, while there is an increase amounting to 255,000 acres in the land laid down in permanent pasture. This change is substantially in the same direction as the general course of changes which have occurred in previous years, and it would appear that in Ireland there is also a diminution this year of the land under clover and an increase of the land under permanent pasture; but in Great Britain the figures appear subject to some explanation. The distinction formerly made under both heads between land 'for hay' and 'not for hay' has this year been omitted as likely to remove the objections felt in some quarters to making the returns, representations having been made to this department that these sub-headings caused much trouble to the farmers in filling up the schedules, and were besides misleading in the case of water meadows and of clover, &c., cut several times in the season; but this omission renders it impossible of course to show in detail whether the decrease in clover and increase in permanent pasture is in land 'for hay' or 'not for hay' or is distributed between the two divisions. At the same time the omission for the first time appears to have brought to light or to have occasioned a confusion of mind

in some quarters as to the distinction between rotation and permanent grasses itself, which makes it difficult to suppose that the diminution under the head of rotation grasses, and increase under the head of permanent pasture, which is almost but not quite general, there being one or two perplexing changes in the opposite direction, can be quite so great as they appear to be. There has apparently been some exaggeration, though not so great on the whole as to affect the main fact that permanent pasture tends steadily to increase, and has in fact increased of late years much as these returns represent, while it is also possible that the omission of the sub-headings has caused an apparent alteration by making the present returns more correct. Still the extent of the alteration in the present year is now being specially investigated, and the figures now given under the heading of 'clover, &c.' and 'permanent pasture' will of course be subject to future correction.

"It is satisfactory to find that orchards in Great Britain have again increased in extent occupying now 175,000 acres as compared with 165,000 acres in 1878.

"There would appear to be still occasion for much more land to be used for orchards, as the demand for fruit increases and the imports from abroad as shown on pp. 98 to 101 of the returns have increased in the last ten years from half a million sterling in value to a million and three quarters. Market gardens have also increased, and in many places the collectors report that the demand for fresh vegetables for the neighbouring towns and the facilities afforded by the railways for bringing produce to London have led many farmers to devote a small portion of their land to vegetables and bush fruits.

"Taking now the various kinds of live stock, I have to notice a small increase in the number of agricultural horses in Great Britain, and a larger one in brood mares and unbroken horses. The effect of the high prices of recent years is shown by an increase of nearly 50 per cent. since 1870, when brood mares and young horses numbered 301,000 in Great Britain, as compared with 448,000 at the present time. The demand for horses for the army is noticed by some of the collecting officers as accounting for the increase during the present year. The imports of horses from abroad have, however, somewhat declined of late, having been 30,000 in 1877, 26,000 in 1878, and 13,000 in the first eight months of 1879.

"As regards horned cattle, milch cows in Great Britain have increased in number by 2 per cent., and young cattle by 7 per cent., but cattle of two years of age are 5 per cent. less, so that the total number of horned cattle is now 5,856,000, or 2 per cent. more than last year. The increase in milking cows is reported to be due to a greater demand for milk, especially near towns, while the American imports of live cattle and meat, and the scarcity of food through the winter and spring have diminished the numbers of two years old cattle. Young cattle, however, are generally reported to have increased in number, more having been bred last year, when breeding paid better than buying store cattle. The number of sheep shows a small increase from last year, but not enough to counterbalance the falling off in lambs, amounting to 366,000 in Great

Britain. With a few exceptions the collectors report the lambing season to have been very unfavourable, and in Scotland the severity of the winter and spring caused a diminution of sheep as well. The number of sheep and lambs in Great Britain is now almost the same as in 1877, namely 28,157,000 as against 28,161,000, and the numbers have been less only in two years since 1867, namely in 1871 and 1872. In Ireland the returns of cattle show a small increase, and of sheep a small decrease, cattle numbering 4,067,000, and sheep 4,017,000. Pigs in Great Britain are fewer in number by nearly 16 per cent.; the competition of American bacon is reported to have reduced the price of pork and bacon, and a species of typhoid is also noticed by some collectors, especially in the south of England, as accounting for a part of the decrease. There is also a proportionate reduction in the number of pigs in Ireland.

“The usual table showing the relative course of agriculture in the counties of England, arranged in two divisions of chiefly grazing and corn-growing counties, has been prepared, and is here given.

“The *grazing*, or *western*, division includes twenty-one counties:—Northumberland, Cumberland, Durham, Westmoreland, York (North and West Ridings), Lancaster, Chester, Derby, Stafford, Leicester, Salop, Worcester, Hereford, Monmouth, Gloucester, Wilts, Dorset, Somerset, Devon, and Cornwall.

“The *corn*, or *eastern*, division includes twenty-one counties:—York (East Riding), Lincoln, Nottingham, Rutland, Huntingdon, Warwick, Northampton, Cambridge, Norfolk, Suffolk, Bedford, Bucks, Oxford, Berks, Hants, Hertford, Essex, Middlesex, Surrey, Kent, and Sussex.

“Although the number of the counties is the same in each of these groups, the total acreage is larger in the grazing than in the corn division, in the ratio of 53 to 47 per cent. of the total acreage under crops and grass in England.

Acreage under Crops, and Number of Live Stock, in Grazing Counties and in Corn Counties of England, and Percentages of the Totals in England in Grazing and Corn Counties respectively.

	In Grazing Counties.		In Corn Counties.	
	Acreage and Number.	Percentage of Total for England.	Acreage and Number.	Percentage of Total for England.
Total acreage returned under all kinds of crops, bare fallow, and grass }	13,051,108	53·3	11,452,774	46·7
Acreage under—				
Wheat	959,407	35·3	1,759,585	64·7
Barley	782,474	35·0	1,453,627	65·0
Oats	752,160	52·8	672,966	47·2
Rye	11,901	29·9	27,907	70·1
Beans.....	112,044	26·7	307,460	73·3
Peas	56,251	20·6	217,340	79·4
Total under above } corn crops	2,674,237	37·6	4,438,885	62·4
Potatoes	188,561	58·2	135,431	41·8
Turnips and swedes.....	659,658	45·3	798,104	54·7
Mangold	104,580	29·7	248,091	70·3
Carrots	3,283	23·5	10,709	76·5
Cabbage, kohl-rabbi, and rape }	61,487	37·9	100,809	62·1
Vetches, lucerne, &c.	129,132	30·3	296,643	69·7
Clover and other grass } under rotation	1,434,977	53·6	1,239,972	46·4
Total under above green } crops and grass under rotation	2,581,678	47·7	2,829,759	52·3
Bare fallow	287,644	42·9	383,512	57·1
Permanent pasture	7,496,141	66·7	3,737,385	33·3
Flax	2,723	39·1	4,247	60·9
Hops	8,685	12·8	58,986	87·2
Orchards, &c.	130,730	76·8	39,476	23·2
Woods, &c.	676,139	51·0	649,626	49·0
Number of horses used } solely for agriculture	370,028	48·1	399,562	51·9
Number of horses, un- } broken, and mares for } breeding	184,039	55·6	147,078	44·4
Number of cattle.....	2,696,643	65·3	1,432,297	34·7
„ sheep.....	9,781,403	53·0	8,664,119	47·0
„ pigs	830,514	46·9	940,567	53·1

Acreage of each Description of Crop in Grazing and Corn Counties of England, and Percentage of Total Cultivated Acreage in each Division, under each Description of Crop.

	In Grazing Counties.		In Corn Counties.	
	Acreage.	Percentage of Total Cultivated Acreage in the Division.	Acreage.	Percentage of Total Cultivated Acreage in the Division.
Acreage under—				
Corn crops	2,674,237	20·5	4,438,885	38·8
Green crops	1,146,701	8·8	1,589,787	13·9
Clover and other } grass under rota- } tion	1,434,977	11·0	1,239,972	10·8
Bare fallow	287,644	2·2	383,512	3·3
Permanent pasture	7,496,141	57·4	3,737,385	32·6

“ On comparing the figures with those of last year, a few slight variations may be found in the distribution of the crops between the two great divisions. Thus in the corn crops the percentage in the grazing counties is now 37·6, compared with 37·9 last year, and that in the corn counties 62·4 against 62·1. In potatoes the grazing counties show a percentage of 58·2 as against 58·6 in 1878, and the corn counties 41·8 against 41·4, and there are other small differences in certain grain crops, but the total acreage under green crops and rotation grasses has almost exactly the same distribution as last year.

“ In bare fallow the grazing counties have now only 42·9 per cent. compared with 44·8 last year. The small area of hops grown in the grazing counties has increased as compared with a decrease in the corn counties, while orchards have increased more in the corn than in the grazing counties. Coming to live stock there is again little difference, but the proportionate number of pigs has varied, the grazing counties having this year 46·9 per cent. against 48·5 per cent. in 1878, and the corn counties 53·1 against 51·5.

“ With a view to increase the usefulness of the return a series of comparative tables has been added, embracing and expanding the information formerly given for a series of years in two short tables immediately appended to the report, and giving in addition certain details as to each county for a series of years. Other tables have also been added comprising and continuing the information as to the prices of corn and other articles of agricultural produce, imports of such articles by quantities and values, and other matters contained in the returns Nos. 273 and 401, Sess. 1878, and No. 210, Sess. 1879. These two sets of tables form Nos. 6 to 29 inclusive of the accompanying return. It is not proposed here to make any extended comment on these tables, but one or two remarks may be permitted to show the extent of the information contained and to facilitate comparison with former reports.

“ With regard to the first two of these tables [Nos. 6 and 7],* showing for each of the last ten years the acreage of land under different crops and number of live stock in each division of the United Kingdom, and also comparing the land under crop with the

* Tables C and D in Appendix that follows.

land under permanent pasture, it may be pointed out that the present tables both cover a larger period and contain more particulars than the corresponding tables in the appendix to former reports. This is especially the case with Table No. 7, which not only compares the arable and pasture land, but distinguishes as regards the arable land, the amounts under corn crops, green crops, and rotation grasses respectively. The steady and large increase in the permanent pasture cannot fail to be noticed while the arable land gradually diminishes. Allowing that this tendency has been exaggerated in the present return in the way above explained, there is no doubt of the broad fact that more and more land is being laid down in grass. To some extent also there is a transfer from arable to grass land, but generally it would seem that arable land on the whole does not greatly diminish, so that if there is a process of converting arable into pasture land going on, it is partially compensated by the simultaneous reclamation of waste land. The following tables (Nos. 8 to 19) give the details of this process for each county in Great Britain, from which it would seem that the process of reclamation must be general. There is hardly any county where there is actually a great *diminution* of the arable land, although there is universally an increase of the land for permanent pasture. In the conspicuously corn counties especially the land under crop remains of much the same extent. In these tables the counties are grouped in a different way from those above given. Instead of dividing England as above into grazing and corn counties on a geographical principle, the grouping in these tables is on the principle of classing as 'corn' any county in which the acreage under corn is two-thirds greater than the acreage under permanent pasture, and as 'pastoral' any county in which the acreage under permanent pasture is two-thirds greater than the acreage under corn, the remaining counties being classed as 'mixed.' Still the grouping yields much the same general result as that above shown. The tendency for permanent pasture to increase is general, but it corresponds with almost equal generality to the reclamation of waste land. If there is any tendency at all for arable land to diminish it is mainly in what may be considered 'pastoral' and not 'corn' counties.

"The remaining Tables (Nos. 23 to 29*) contain the information as to prices, &c., already referred to. It will be sufficient to observe for the sake of comparison and reference that Tables Nos. 23 and 29 are a continuation of the Returns Nos. 273 and 401, Sess. 1878, and Tables Nos. 24 to 28 a continuation of the Return No. 210, Sess. 1879.

"The returns of the crops and live stock in British possessions and foreign countries have for the last two years ceased to be published with this report, the principal figures being annually published in the statistical abstracts relating respectively to the colonies and foreign countries; but with a view of quoting briefly in this report the principal results in the Australian colonies and in the United States, special application has been made to the heads of the respective statistical departments, who have most courteously responded to the request.

"From the Australian accounts it appears that more than $2\frac{1}{2}$ million acres of land in Australia were under wheat in the last harvest (1878-79), being more than twice the area under wheat eight

* Table 29 will be found under Table E in Appendix hereto.

years ago, and within 500,000 acres of the wheat acreage of the United Kingdom. The produce, however, in the present year was little more than 26 million bushels, or about 10 bushels per acre; the largest wheat growing colony (South Australia) having an average yield of little more than 7 bushels per acre, while New Zealand averaged nearly 23 bushels, and New South Wales $14\frac{3}{4}$ bushels per acre.

“Barley is not an important crop in Australia, and was grown on only 80,000 acres of land, producing 1,600,000 bushels, or 20 bushels per acre. Oats were grown on 467,000 acres, and yielded nearly 12 million bushels, or 25 bushels per acre; and the maize crop, which is grown to any great extent only in New South Wales and Queensland, was 186,000 acres in area, and 6 millions in produce, or an average of more than 32 bushels per acre. Potatoes were planted on 88,000 acres, and yielded 290,000 tons, or more than 3 tons per acre, New Zealand averaging 5 tons per acre.

“The extent and produce of the vineyards in Australia have shown little increase during the last ten years, the vines having this year been planted on 14,000 acres, and 1,617,000 gallons of wine were made therefrom. In spite of the protection which the colonial wines enjoy from custom duties, of about 4s. per gallon on imported wines, the latter are still very largely drunk by the colonists, more than a million gallons being annually imported.

“Turning to the live stock we find more than a million horses in Australia, including New Zealand—a large number compared with the population. The number of horned cattle was more than $7\frac{1}{4}$ millions, and of sheep about 61 millions. The numbers of both cattle and sheep were much diminished through the drought of 1877-78, but in most of the colonies the losses have now been repaired, though in Victoria and in Queensland the number of sheep shows a further falling off, owing, it is stated, as regards the latter, to the drought of the past season. The decrease in sheep in Queensland has, however, been almost continuous since 1868, when they numbered nearly 9 millions as compared with $5\frac{1}{2}$ millions at the present time. Pigs in Australia were 815,000 in number.

“As regards the United States, the latest returns state the acreage under wheat this year as 32,836,000, an increase of 2 per cent. over last year's figures. Maize covered 53,085,000 acres, an increase of 3 per cent.; barley 1,733,000, a decrease of 3 per cent.; rye 1,551,000, a decrease of 5 per cent.; and oats 12,683,000, a decrease of 4 per cent.

“The returns of the yield of these crops will not be obtained till next month, but the reports received by the department of agriculture at Washington state that the wheat and maize crops are excellent, and likely to equal the yield of last year, when their products amounted respectively to 407 million bushels and 1,346 million bushels. The yield of wheat per acre in the United States in the four years ended 1878 is stated to have been less than 11 bushels in 1875, 10 bushels in 1876, $13\frac{1}{2}$ bushels in 1877, and rather less than 13 bushels in 1878; the acreage of wheat in 1875 having been 26,382,000, as compared with 32,836,000 in the present year. The returns of live stock for 1879 have not yet been received, but in 1878 there were nearly 11 million horses, $33\frac{1}{4}$ million cattle, 38 million sheep, and $34\frac{3}{4}$ million pigs.

APPENDIX.

TABLE A.—*Total Area and Acreage under each kind of Crop, Bare Fallow, and Grass; and 1878, in each Division of Great Britain, with similar Particulars*

	England.		Wales.		Scotland.	
	1879.	1878.	1879.	1878.	1879.	1878.
TOTAL AREA AND ACREAGE UNDER CORN CROPS,						
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Total area	32,597,	32,597,	4,722,	4,722,	19,496,	19,496,
„ acreage under crops, bare fallow, and grass ..	24,504,	24,418,	2,759,	2,747,	4,713,	4,690,
CORN CROPS—						
Wheat.....	2,719,	3,041,	95,	102,	77,	75,
Barley or bere	2,236,	2,063,	153,	148,	279,	259,
Oats	1,425,	1,430,	227,	235,	1,004,	1,034,
Rye.....	40,	50,	1,	1,	8,	9,
Beans	419,	413,	3,	3,	22,	23,
Peas	274,	278,	3,	3,	1,	1,
Total of corn crops	7,113,	7,275,	482,	492,	1,391,	1,401,
GREEN CROPS—						
Potatoes	324,	302,	43,	41,	175,	166,
Turnips and swedes.....	1,458,	1,467,	67,	68,	492,	497,
Mangold	352,	334,	8,	7,	3,	2,
Carrots	14,	13,	1,	1,	1,	1,
Cabbage, kohlrabi, and rape.....	162,	164,	1,	1,	5,	6,
Vetches and other green crops, except clover or } grass	426,	401,	7,	5,	15,	15,
Total of green crops.....	2,736,	2,681,	127,	123,	691,	687,
Clover, sanfoin, and grasses under rotation	2,675,	2,785,	347,	356,	1,451,	1,432,
Permanent pasture or grass not broken up in rota- } tion (exclusive of heath or mountain land).....	11,234,	11,010,	1,774,	1,748,	1,159,	1,153,
Flax.....	7,	7,	—	—	—	—
Hops	68,	72,	—	—	—	—
Bare fallow or uncropped arable land	671,	588,	29,	27,	21,	17,
NUMBER OF LIVE STOCK, AS RETURNED UPON						
Horses (including ponies), as returned by occupiers of land—						
Used solely for purpose of agriculture, &c.	770,	767,	73,	72,	142,	140,
Unbroken horses and mares kept solely for breeding	331,	322,	63,	60,	54,	52,
Total of horses	1,101,	1,089,	136,	132,	196,	192,
Cattle—						
Cows and heifers in milk or in calf	1,605,	1,568,	262,	252,	389,	388,
Other cattle—						
2 years of age and above.....	1,033,	1,086,	112,	112,	260,	279,
Under 2 years of age	1,491,	1,381,	270,	244,	435,	428,
Total of cattle	4,129,	4,035,	644,	608,	1,084,	1,095,
Sheep—						
1 year old and above	11,521,	11,410,	2,012,	1,998,	4,639,	4,647,
Under 1 year old	6,925,	7,034,	861,	928,	2,199,	2,389,
Total of sheep	18,446,	18,444,	2,873,	2,926,	6,838,	7,036,
Pigs	1,771,	2,125,	193,	218,	128,	140,

* From Returns prepared by the Registrar-General for Ireland, and laid before Parliament.

APPENDIX.

and Number of Horses, Cattle, Sheep, and Pigs, as returned upon the 4th June, 1879, for Ireland,* and with Total for United Kingdom. [000's omitted.]

Great Britain.		Ireland.		United Kingdom, including Isle of Man and Channel Islands.	
1879.	1878.	1879.	1878.	1879.	1878.
GREEN CROPS, BARE FALLOW, GRASS, &c.					
Acres. 56,815, 31,976,	Acres. 56,815, 31,855,	Acres. 20,820, 15,336,	Acres. 20,820, 15,345,	Acres. 77,829, 47,437,	Acres. 77,829, 47,327,
2,890, 2,667, 2,657, 49, 444, 278,	3,218, 2,470, 2,699, 60, 438, 283,	158, 255, 1,330, 9, 9, 1,	154, 245, 1,413, 11, 8, 1,	3,056, 2,932, 3,998, 58, 454, 279,	3,382, 2,723, 4,124, 71, 446, 284,
8,985,	9,168,	1,762,	1,831,	10,777,	11,030,
541, 2,017, 364, 16, 168, 448,	508, 2,032, 343, 15, 172, 421,	843, 315, † 51, † 5, 40, 41,	847, 330, † 45, † 4, 47, 45,	1,393, 2,342, 415, 21, 209, 492,	1,365, 2,372, 389, 19, 219, 468,
3,554,	3,491,	1,295,	1,318,	4,872,	4,832,
4,473,	4,573,	1,937,	1,943,	6,451,	6,558,
14,167,	13,911,	10,198,	10,125,	24,396,	24,065,
7, 68, 721,	7, 72, 632,	128, —, 16,	112, —, 17,	135, 68, 738,	119, 72, 650,
THE 4TH JUNE, 1879 AND 1878.					
985, 448,	979, 433,	513,	505,	1,955,	1,927,
1,433,	1,413,	512,	505,	1,955,	1,927,
2,255,	2,208,	1,465,	1,484,	3,736,	3,709,
1,405, 2,196,	1,477, 2,053,	840, 1,762,	877, 1,624,	2,250, 3,975,	2,357, 3,695,
5,856,	5,738,	4,067,	3,985,	9,961,	9,761,
18,172, 9,985,	18,055, 10,351,	2,572, 1,446,	2,590, 1,504,	20,780, 11,458,	20,684, 11,887,
28,157,	28,406,	4,018,	4,094,	32,238,	32,571,
2,092,	2,483,	1,072,	1,269,	3,178,	3,768,

Total area
„ acreage under crops, bare fallow, and grass

Corn Crops—
Wheat
Barley or bere
Oats
Rye
Beans
Peas

Total of corn crops

Green Crops—
Potatoes
Turnips and swedes
Mangold
Carrots
Cabbage, kohl-rabi, and rape
{ Vetches and other green crops, except clover or
grass

Total of green crops

Clover, sanfoin, and grasses under rotation—

{ Permanent pasture or grass not broken up in rotation
(exclusive of heath or mountain land)—

Flax
Hops
Bare fallow or uncropped arable land

Horses (including ponies), as returned by occupiers
of land—
Used solely for purpose of agriculture, &c.
Unbroken horses and mares kept solely for breeding

Total of horses

Cattle—
Cows and heifers in milk or in calf
Other cattle—
2 years of age and above
Under 2 years of age

Total of cattle

Sheep—
1 year old and above
Under 1 year old

Total of sheep

Pigs

† Including beet root.

‡ Including parsnips.

TABLE B.—*Percentage of Total Cultivated Acreage under Various Kinds of Crops, and Number of each Kind of Live Stock to every 100 Acres*

	England.		Wales.		Scotland.	
	1879.	1878.	1879.	1878.	1879.	1878.
PERCENTAGE OF TOTAL CULTIVATED ACREAGE						
Corn crops (including beans and } peas)	29·0	29·8	17·5	17·9	29·5	29·9
Green crops	11·2	11·0	4·6	4·5	14·7	14·6
Bare fallow	2·7	2·4	1·0	1·0	0·4	0·4
Grass—						
Clover, &c., under rotation	10·9	11·4	12·5	13·0	30·8	30·5
Permanent pasture	45·9	45·1	64·4	63·6	24·6	24·6
Other crops	0·3	0·3	0·0	0·0	0·0	0·0
Total	100·0	100·0	100·0	100·0	100·0	100·0
PERCENTAGE OF TOTAL ACREAGE OF CORN CROPS						
Wheat	38·2	41·8	19·7	20·7	5·5	5·4
Barley or bere	31·4	28·3	31·7	30·1	20·0	18·5
Oats	20·0	19·7	47·1	47·8	72·2	73·8
Rye	0·6	0·7	0·3	0·3	0·6	0·6
Beans	5·9	5·7	0·6	0·5	1·6	1·6
Peas	3·9	3·8	0·6	0·6	0·1	0·1
Total	100·0	100·0	100·0	100·0	100·0	100·0
PERCENTAGE OF TOTAL ACREAGE OF GREEN CROPS						
Potatoes	11·8	11·3	33·6	33·3	25·3	24·1
Turnips and swedes	53·3	54·7	53·0	55·0	71·2	72·4
Mangold	12·9	12·5	6·6	5·9	0·4	0·3
Carrots	0·5	0·5	0·4	0·3	0·2	0·2
Cabbages, kohl-rabi, and rape	5·9	6·1	1·0	1·1	0·7	0·9
Vetches, lucerne, and any other } green crop, except clover or } grass	15·6	14·9	5·4	4·4	2·2	2·1
Total	100·0	100·0	100·0	100·0	100·0	100·0
NUMBER OF EACH KIND OF LIVE STOCK TO EVERY						
Horses	4·5	4·5	4·9	4·8	4·2	4·1
Cattle	16·9	16·5	23·3	22·1	23·0	23·4
Sheep	75·3	75·5	104·2	106·5	145·1	150·0
Pigs	7·2	8·7	7·0	7·9	2·7	3·0

of the Acreage of Corn and Green Crops under the several Descriptions of such Crops, under Cultivation, in each of the Years 1879 and 1878.

Great Britain.		Ireland.		United Kingdom, including Isle of Man and Channel Islands.	
1879.	1878.	1879.	1878.	1879.	1878.
UNDER VARIOUS KINDS OF CROPS IN EACH YEAR.					
28.1	28.8	11.5	11.9	22.7	23.3
11.1	10.9	8.5	8.6	10.3	10.2
2.3	2.0	0.1	0.1	1.6	1.4
14.0	14.4	12.6	12.7	13.6	13.9
44.3	43.7	66.5	66.0	51.4	50.8
0.2	0.2	0.8	0.7	0.4	0.4
100.0	100.0	100.0	100.0	100.0	100.0
UNDER EACH KIND OF CORN CROP IN EACH YEAR.					
32.2	35.1	8.9	8.4	28.4	30.7
29.7	26.9	14.5	13.4	27.2	24.7
29.6	29.4	75.5	77.1	37.1	37.4
0.5	0.7	0.5	0.6	0.5	0.6
4.9	4.8	0.5	0.4	4.2	4.0
3.1	3.1	0.1	0.1	2.6	2.6
100.0	100.0	100.0	100.0	100.0	100.0
UNDER EACH KIND OF GREEN CROP IN EACH YEAR.					
15.2	14.6	65.1	64.3	28.6	28.2
56.8	58.2	24.3	25.0	48.1	49.1
10.2	9.8	4.0	3.4	8.5	8.1
0.4	0.4	0.3	0.3	0.4	0.4
4.8	4.9	3.1	3.6	4.3	4.5
12.6	12.1	3.2	3.4	10.1	9.7
100.0	100.0	100.0	100.0	100.0	100.0
100 ACRES UNDER CROPS, FALLOW AND GRASS.					
4.5	4.4	3.3	3.3	4.1	4.1
18.3	18.0	26.5	26.0	21.0	20.6
88.1	89.2	26.1	26.7	68.0	68.8
6.5	7.8	7.0	8.3	6.7	8.0

{	Corn crops (including beans and peas)	
	Green crops	
	Bare fallow	
	Grass—	
	Clover, &c., under rotation	
	Permanent pasture	
	Other crops	
	Total	
	Wheat	
	Barley or bere	
Oats		
Rye		
Beans		
Peas		
Total		
Potatoes		
Turnips and swedes		
Mangold		
Carrots		
Cabbages, kohl-rabi, and rape		
{ Vetches, lucerne, and any other green crop, except clover or grass		
Total		
Horses		
Cattle		
Sheep		
Pigs		

TABLE C.—*Summary of Total Acreage under each Principal Crop, and of the Number*

		1870.	1871.	1872.	1873.	1874.
Principal Crops.		Acres.	Acres.	Acres.	Acres.	Acres.
Wheat....	England	3,247,973	3,312,550	3,336,888	3,252,802	3,391,440
	Wales	126,928	126,334	126,367	116,852	117,869
	Scotland	125,642	133,010	135,702	120,726	120,991
	Great Britain....	3,500,543	3,571,894	3,598,957	3,490,380	3,630,300
Barley or Bere	England	1,963,744	1,964,210	1,896,403	1,926,183	1,889,722
	Wales	163,853	169,751	168,014	163,613	152,425
	Scotland	244,142	251,822	251,915	246,117	245,840
	Great Britain....	2,371,739	2,385,783	2,316,332	2,335,913	2,287,987
Oats.....	England	1,490,647	1,454,144	1,442,075	1,419,128	1,356,739
	Wales	253,057	253,672	256,074	244,893	235,621
	Scotland	1,019,596	1,007,891	1,007,688	1,012,206	1,004,024
	Great Britain....	2,763,300	2,715,707	2,705,837	2,676,227	2,596,384
Potatoes	England	358,890	391,531	339,056	309,419	314,571
	Wales	48,602	51,853	48,417	44,936	45,379
	Scotland	180,169	184,307	176,615	160,327	160,480
	Great Britain....	587,661	627,691	564,088	514,682	520,430
Turnips and Swedes	England	1,641,686	1,592,933	1,512,496	1,540,307	1,560,857
	Wales	70,293	69,833	69,185	70,821	70,843
	Scotland	498,932	500,978	501,826	510,780	501,636
	Great Britain....	2,210,911	2,163,744	2,083,507	2,121,908	2,133,336
Clover, &c., under Rotation	England	2,766,777	2,694,370	2,822,392	2,678,311	2,618,655
	Wales	398,282	375,086	370,850	360,555	365,078
	Scotland	1,339,825	1,299,992	1,320,209	1,327,952	1,357,009
	Great Britain....	4,504,884	4,369,448	4,513,451	4,366,818	4,340,742
Live Stock.		No.	No.	No.	No.	No.
Cattle	England	3,757,134	3,671,064	3,901,663	4,173,635	4,305,440
	Wales	604,749	596,588	602,738	642,857	665,105
	Scotland	1,041,434	1,070,107	1,120,593	1,148,057	1,154,846
	Great Britain....	5,403,317	5,337,759	5,624,994	5,964,549	6,125,391
Sheep	England	18,940,256	17,530,407	17,912,904	19,169,851	19,859,758
	Wales	2,706,479	2,706,415	2,867,144	2,966,862	3,064,696
	Scotland	6,750,854	6,882,747	7,141,459	7,290,922	7,389,487
	Great Britain....	28,397,589	27,119,569	27,921,507	29,427,635	30,313,941
Pigs*	England	1,813,901	2,078,504	2,347,512	2,141,417	2,058,781
	Wales	198,547	225,456	238,317	211,174	213,754
	Scotland	158,690	195,642	185,920	147,668	150,297
	Great Britain....	2,171,138	2,499,602	2,771,749	2,500,259	2,422,832

* Exclusive of those kept in towns and by

Live Stock returned in Great Britain, in each Year from 1870 to 1879 inclusive.

1875.	1876.	1877.	1878.	1879.	Principal Crops.		
Acres.	Acres.	Acres.	Acres.	Acres.			
3,128,547 111,797 102,137	2,823,342 94,423 78,192	2,987,129 100,226 81,185	3,041,241 101,813 75,363	2,718,992 94,639 76,613	England Wales Scotland Great Britain	} Wheat.	
3,342,481	2,995,957	3,168,540	3,218,417	2,890,244			
2,090,423 154,444 264,834	2,109,265 153,647 270,197	2,000,531 147,212 269,845	2,062,498 148,116 259,038	2,236,101 152,491 278,584	England Wales Scotland Great Britain		} Barley or Bere.
2,509,701	2,533,109	2,417,588	2,469,652	2,667,176			
1,421,951 237,170 1,004,888	1,534,249 242,417 1,021,764	1,489,999 239,298 1,024,882	1,430,376 234,986 1,033,545	1,425,126 226,967 1,004,535	England Wales Scotland Great Britain	} Oats.	
2,664,009	2,798,430	2,754,179	2,698,907	2,656,628			
320,477 44,505 157,671	305,429 42,581 154,709	303,964 42,942 165,565	301,852 40,816 165,763	323,992 42,609 174,743	England Wales Scotland Great Britain		} Potatoes.
522,653	502,719	512,471	508,431	541,344			
1,569,049 70,326 503,323	1,561,116 72,049 512,408	1,495,885 70,813 506,757	1,466,973 67,531 497,356	1,457,762 67,349 491,964	England Wales Scotland Great Britain	} Turnips and Swedes.	
2,142,698	2,145,573	2,073,455	2,031,860	2,017,075			
2,608,106 360,596 1,385,369	2,787,103 360,159 1,393,011	2,737,387 351,797 1,405,032	2,785,097 356,486 1,431,524	2,674,949 347,473 1,450,951	England Wales Scotland Great Britain		} Clover, &c., under Rotation.
4,354,071	4,540,273	4,494,216	4,573,107	4,473,373			
No.	No.	No.	No.	No.	Live Stock.		
4,218,470 651,274 1,143,080	4,076,410 636,644 1,131,087	3,979,650 616,209 1,102,074	4,034,552 608,189 1,095,387	4,128,940 643,815 1,083,601	England Wales Scotland Great Britain	} Cattle.	
6,012,824	5,844,141	5,697,933	5,738,128	5,856,356			
19,114,634 2,951,810 7,100,994	18,320,091 2,873,141 6,989,719	18,330,377 2,862,013 6,968,774	18,444,004 2,925,806 7,036,396	18,445,522 2,873,460 6,838,098	England Wales Scotland Great Britain		} Sheep.
29,167,438	28,182,951	28,161,164	28,406,206	28,157,080			
1,875,357 203,348 151,213	1,924,033 215,488 154,099	2,114,751 230,720 153,257	2,124,722 218,337 140,189	1,771,081 192,757 127,721	England Wales Scotland Great Britain	} Pigs.	
2,229,918	2,293,620	2,498,728	2,483,248	2,091,559			

cottagers with less than $\frac{1}{4}$ of an acre of land.

TABLE D.—*Total Acreage under Crops, Bare Fallow, and Grass; and Acreage under Corn Land), in England, Wales, and Scotland*

	1870.	1871.	1872.	1873.	1874.
Total Acreage under—					
Crops, Bare Fallow, and Grass:—	Acres.	Acres.	Acres.	Acres.	Acres.
England	23,409,318	23,717,660	23,830,197	23,893,558	24,008,368
Wales	2,547,717	2,604,817	2,635,642	2,647,080	2,678,730
Scotland	4,450,544	4,516,090	4,538,334	4,561,982	4,579,821
Total	30,407,579	30,838,567	31,004,173	31,102,620	31,266,919
Corn Crops:—					
England	7,570,279	7,683,692	7,576,698	7,501,713	7,505,076
Wales	553,501	560,700	561,916	536,786	516,001
Scotland	1,424,261	1,430,869	1,434,937	1,420,429	1,410,413
Total	9,548,041	9,675,261	9,573,551	9,458,928	9,431,490
Green Crops:—					
England	2,759,826	2,897,545	2,778,925	2,749,318	2,764,182
Wales	130,203	136,541	136,065	133,232	131,956
Scotland	696,701	704,094	701,393	693,936	685,132
Total	3,586,730	3,738,180	3,616,383	3,576,486	3,581,270
Clover, &c.:—					
England	2,766,777	2,694,370	2,822,392	2,678,311	2,618,655
Wales	398,282	375,086	370,850	360,555	365,078
Scotland	1,339,825	1,299,992	1,320,209	1,327,952	1,357,009
Total	4,504,884	4,369,448	4,513,451	4,366,818	4,340,742
Total Acreage of—					
Arable Land:—					
England	13,729,107	13,835,827	13,839,369	13,655,744	13,570,219
Wales	1,120,068	1,110,352	1,103,758	1,065,495	1,045,188
Scotland	3,485,548	3,456,946	3,485,440	3,465,452	3,473,500
Total	18,334,723	18,403,125	18,428,567	18,186,691	18,088,907
Permanent Pasture:—					
England	9,680,211	9,881,833	9,990,828	10,237,814	10,438,149
Wales	1,427,649	1,494,465	1,531,884	1,581,585	1,633,542
Scotland	964,996	1,059,144	1,052,894	1,096,530	1,106,321
Total	12,072,856	12,435,442	12,575,606	12,915,929	13,178,012

Crops, Green Crops, Clover, &c., and Permanent Pasture (exclusive of Heath and Mountain in each Year from 1870 to 1879 inclusive.

1875.	1876.	1877.	1878.	1879.	
Acres.	Acres.	Acres.	Acres.	Acres.	Total Acreage under— Crops, Bare Fallow, and Grass:—
24,112,309 2,696,143 4,607,898	24,201,622 2,712,097 4,637,893	24,312,033 2,731,159 4,669,221	24,417,815 2,746,511 4,690,206	24,503,882 2,758,743 4,713,159	England. Wales. Scotland.
31,416,350	31,551,612	31,712,413	31,854,532	31,975,784	Total.
					Corn Crops:—
7,528,543 512,178 1,410,929	7,288,186 498,968 1,407,515	7,302,772 494,678 1,412,679	7,274,811 491,868 1,400,967	7,113,122 481,577 1,390,535	England. Wales. Scotland.
9,451,650	9,194,669	9,210,129	9,167,646	8,985,234	Total.
					Green Crops:—
2,848,473 131,085 684,549	2,752,434 129,466 689,974	2,759,174 129,535 696,137	2,680,983 122,708 687,319	2,736,488 126,951 690,879	England. Wales. Scotland.
3,664,107	3,571,874	3,584,846	3,491,010	3,554,318	Total.
					Clover, &c.:—
2,608,106 360,596 1,385,369	2,787,103 360,159 1,393,011	2,737,387 351,797 1,405,032	2,785,097 356,486 1,431,524	2,674,949 347,473 1,450,951	England. Wales. Scotland.
4,354,071	4,540,273	4,494,216	4,573,107	4,473,373	Total.
					Total Acreage of— Arable Land:—
13,576,026 1,029,830 3,497,873	13,512,993 1,014,151 3,508,524	13,454,017 998,876 3,531,165	13,408,235 998,310 3,536,691	13,270,356 984,932 3,553,772	England. Wales. Scotland.
18,103,729	18,035,668	17,984,058	17,943,236	17,809,060	Total.
					Permanent Pasture:—
10,536,283 1,666,313 1,110,025	10,688,629 1,697,946 1,129,369	10,858,016 1,732,283 1,138,056	11,009,580 1,748,201 1,153,515	11,233,526 1,773,811 1,159,387	England. Wales. Scotland.
13,312,621	13,515,944	13,728,355	13,911,296	14,166,724	Total.

TABLE E.—*Population* of the United Kingdom and Value of Imports of Live Stock, Corn and Grain, and various Kinds of Dead Meat and Provisions† in each of the Years 1852 to 1878, and Proportion per Head of Population.*

Years.	Population* of the United Kingdom, Estimated at the middle of each Year.	Imports.					Value per Head of Population.
		Live Cattle, Sheep, and Pigs.	Corn, Grain, and Flour.	Dead Meat and Provisions.†	Total.		
	No.	£	£	£	£		£ s. d.
1859....	28,590,224	1,634,766	18,044,203	4,680,629	24,359,598		- 17 -
'60....	28,778,411	2,117,860	31,676,353	8,076,304	41,870,517		1 9 1
'61....	28,974,362	2,211,969	34,922,095	9,151,078	46,285,142		1 11 11
'62....	29,255,015	1,888,236	37,774,148	10,630,734	50,293,118		1 14 5
'63....	29,433,918	2,655,072	25,956,520	10,841,324	39,452,916		1 6 10
'64....	29,628,578	4,275,322	19,882,181	12,157,010	36,314,513		1 4 6
'65....	29,861,908	6,548,413	20,725,483	12,667,838	39,941,734		1 6 9
'66....	30,076,812	5,839,058	30,049,655	13,483,715	49,372,428		1 12 10
'67....	30,334,999	4,148,382	41,368,349	12,489,331	58,006,062		1 18 3
'68....	30,617,718	2,698,496	49,432,624	13,277,683	55,408,803		1 16 2
'69....	30,913,513	5,299,087	37,351,089	15,189,933	54,840,109		1 17 5
'70....	31,205,444	4,654,905	34,170,221	14,773,712	53,598,838		1 14 4
'71....	31,513,442	5,663,150	42,691,464	16,593,668	64,948,282		2 1 3
'72....	31,835,757	4,894,850	51,228,816	18,604,273	74,227,939		2 6 8
'73....	32,124,598	5,418,584	51,737,811	23,854,967	81,011,362		2 10 5
'74....	32,426,369	5,265,041	51,070,202	25,224,958	81,560,201		2 10 4
'75....	32,749,167	7,326,288	53,086,691	25,880,806	86,293,785		2 12 8
'76....	33,093,439	7,260,119	51,812,438	29,851,647	88,924,204		2 13 9
'77....	33,446,930	6,012,564	63,536,322	30,144,013	99,692,899		2 19 7
'78....	33,799,386	7,453,309	59,064,875	29,478,065	95,996,249		2 16 10

* Exclusive of the army, navy, and merchant seamen abroad.

† Beef, meat salted or fresh, meat preserved otherwise than by salting, pork, bacon, and hams, butter, cheese, eggs, and potatoes.

III.—*The Crops of 1879.*

WE extract the following from the *Times* of the 3rd November, 1879:—

“ Farmers have harvested in the South and are still cutting and carrying in the later districts, including large portions of the Northern counties and of Scotland, probably the worst wheat crop on record since the year 1816. The inference drawn two months ago from a consideration of the backward and sodden condition of the plant in spring, the exceptionally low mean temperature of the summer, the absence of sunshine even on otherwise mild days, the undue prevalence of excessive moisture in the air, the extraordinary series of deluging downfalls of rain, the incessant repetition of storms throughout the summer, and the late cold and wet

period for ripening, has been strictly verified in a most deficient yield of wheat. The favourable harvest-time then hoped for as the remaining chance for mitigating by good, dry condition the inevitable shortness in yield came not; but, in place of the hot, bright season of ingathering so earnestly desired, a late, wet, winterly time has further damaged the crops, almost to the point of destruction in many cases; and farmers in all parts of the kingdom have had to struggle against the delays and disappointments of a most difficult time for reaping and carting. Early estimates of the probable total production of grain were published by various authorities, all announcing a very great deficiency in wheat and barley. But now the reports from all parts of the country, confirmed by personal observation in many corn-growing centres, intensify the darkness of the picture which those early estimates drew; and the public do not yet seem awake to the full magnitude of the calamity which has fallen upon agriculturists, and, through them, upon the whole community.

“In endeavouring to value roughly the wheat produce of the United Kingdom for 1879, subject to correction to some extent when thrashing has been further proceeded with, we can fairly judge of the whole from the character of the crop in a large number of sample or test localities distributed through the principal wheat-growing districts, and from the proportion which the yield is considered to bear to an average in the numerous situations furnishing the *data*. And here the areas referred to are of importance; the average or normal yield per acre being very different in one region from what it is in another, varying according to diversities of soil, climate, altitude, aspect, shelter or exposure, the style of farm-management, and other circumstances which govern the quantity and quality of the produce. If areas of great normal yield per acre have this year the most serious deficiency, while areas of light normal yield are less affected, the result is worse than if the contrary had been the case. Hence it is important to connect yield with acreage; and, in the absence of any measurements of clays and light lands respectively, we have to take the only surveyed areas we possess for the kingdom generally, and these are the areas of land sown with wheat in each county as ascertained by the Agricultural Returns.

“According to statistics collected in the year 1871 from as many as forty to fifty growers in each county, and those scattered through the different Poor Law Unions so as to embrace every district of each county under as many separate estimates, the normal or average yield of wheat for each English county may be taken as in the following table. Or rather, these quantities represent what were judged, nine years ago, to be average crops, a run of years in which deficient seasons predominated having modified and reduced these averages since that time. It will be seen that the normal yield per acre is greatest in Kent, Essex, Cambridgeshire, Lincolnshire, Huntingdonshire, Northamptonshire, and Lancashire, in all these counties equalling or exceeding 32 bushels per acre, Kent attaining the *maximum* county average— $33\frac{3}{4}$ bushels per acre. The yield is under 32 but up to 30 bushels in Norfolk, Nottinghamshire,

Leicestershire, Rutland, Yorkshire, Cheshire, Warwickshire, Worcestershire, Oxfordshire, Berkshire, Bedfordshire, and Sussex. The standard average is 28 and under 30 bushels per acre in Cumberland, Westmoreland, Derbyshire, Staffordshire, Suffolk, Hertfordshire, Buckinghamshire, Gloucestershire, Herefordshire, Monmouthshire, Somersetshire, Wiltshire, Dorsetshire, Hampshire, and Surrey. And in Northumberland, Durham, Shropshire, North Wales, South Wales, Devonshire and Cornwall it is below 28 bushels per acre. In Cornwall the normal crop is 25, and in Devonshire only $21\frac{1}{2}$ bushels per acre. The standard average wheat yield, as arrived at from the inquiry referred to, is, for England, 29 9-10 bushels per acre; for Wales, 27 bushels; for Scotland, 29 bushels; making, for Great Britain, 29 7-10 bushels. The average for Ireland is taken at 25 bushels; for islands in the British seas at 28 bushels; bringing the standard average for the United Kingdom to $29\frac{1}{2}$ bushels per acre. This general average, as already said, applies to a lengthy period preceding 1871, and held good for the five years 1866 to 1870; but, as will appear presently, an excess of inferior harvests in the series of subsequent years down to 1879 is estimated to have lowered the mean yield by three bushels per acre, the last five years having averaged only 24 bushels, or $5\frac{1}{2}$ below the standard.

“In the following table the counties are arranged in the order of greatest acreage sown with wheat, and the fourth column gives the estimated amount of produce in imperial quarters which the present harvest would have realised had it been a normal or standard average crop:—

County.	Standard Average Yield of Wheat in Bushels per Acre.	Acres of Wheat Grown in 1879.	Produce of 1879, had the Crop been an Average, in Imperial Quarters.
Lincolnshire	$32\frac{3}{4}$	247,100	1,011,600
Yorkshire	30	217,100	814,100
Norfolk	31	178,700	692,500
Essex	33	162,100	668,700
Suffolk	$28\frac{3}{4}$	134,600	483,700
Cambridgeshire	33	117,500	484,700
Devonshire	$21\frac{1}{2}$	107,400	288,600
Hampshire	$29\frac{1}{2}$	100,100	369,100
Sussex	30	89,100	334,100
Kent	$33\frac{3}{4}$	89,000	369,700
Wiltshire	29	87,000	315,400
Gloucestershire	28	80,800	282,800
Shropshire	26	67,100	218,000
Northamptonshire	$32\frac{1}{4}$	68,200	274,900
Somersetshire	29	61,400	222,600
Warwickshire	30	60,300	226,100
Nottinghamshire	30	60,000	225,000
Hertfordshire	$28\frac{1}{2}$	59,400	201,600
Worcestershire	30	58,100	179,100
Berkshire	$31\frac{1}{2}$	55,000	216,600
Oxfordshire	31	54,400	210,800
Buckinghamshire	29	51,100	185,200

County.	Standard Average Yield of Wheat in Bushels per Acre.	Acres of Wheat Grown in 1879.	Produce of 1879, had the Crop been an Average, in Imperial Quarters.
Herefordshire.....	29½	49,300	181,800
Bedfordshire.....	30	47,400	177,800
Staffordshire.....	29½	43,800	161,500
Cornwall.....	25	43,200	135,000
Huntingdonshire.....	32½	43,100	175,100
Dorsetshire.....	29	39,400	142,800
Surrey.....	28	38,300	134,000
Leicestershire.....	31	34,100	132,100
Durham.....	26	30,500	99,100
Lancashire.....	32	27,600	110,400
Cheshire.....	30	25,300	94,900
Derbyshire.....	29	23,000	83,400
Northumberland.....	27	22,800	76,900
Monmouthshire.....	29	16,400	59,200
Cumberland.....	29	16,300	59,100
Rutland.....	31¼	8,500	33,200
Middlesex.....	31	6,800	26,300
Westmoreland.....	28	1,200	4,200
Total for England.....	29 9-10	2,719,500	10,161,700
Wales.....	27	94,600	316,700
Scotland.....	29	76,600	277,700
Total for Great Britain...	29 7-10	2,890,700	10,756,100
Ireland.....	25	157,500	492,200
Islands.....	28	8,600	30,100
Total for the United Kingdom.....}	29½	3,056,800	11,278,400

“It will be observed that the order of greatest area and the order of greatest production are not coincident. For example, Cambridgeshire, with 17,000 acres less wheat area than Suffolk, yields quite as much grain; Hampshire, 7,000 acres below Devonshire, produces 80,000 quarters more; Berkshire, with about the same number of acres as Worcestershire under wheat, yields 37,000 quarters more; and Huntingdonshire, with about the same wheat area as Cornwall, produces 40,000 quarters more. Taking the average yields and the distribution of the wheat area together, it appears that nearly half the total wheat produce of the United Kingdom is, on an average, grown in 10 English counties—namely, Lincolnshire, Yorkshire, Norfolk, Essex, Suffolk, Cambridgeshire, Devonshire, Hampshire, Sussex, and Kent. Nearly one-fourth of our wheat crop is grown in three counties—namely, Lincolnshire, Yorkshire, and Norfolk, and considerably more than a fourth in four counties, including Essex. Lincolnshire, which heads the list of wheat-bearing provinces with a *maximum* crop of over 1,000,000 quarters, reaps and thrashes over a fourth more wheat than all Scotland and Ireland together. Each one of 12

English counties exceeds Scotland in the amount of its wheat produce; Suffolk grows nearly as much wheat as Ireland does; and Wiltshire and the whole of the principality send about equal quantities of wheat to market. Thus, it is of higher importance to ascertain how the crop turns out in the few principal wheat counties than in whole divisions of the United Kingdom. To form a just idea of the total wheat crop of any year, as compared with the standard, it is necessary to take into consideration all the counties, of little as well as great production; but the result depends upon allowing to each its due share in contributing to the total.

“Now, in gauging the deficiency of the present harvest in any county several considerations must have weight. The figures in the estimates given in tabular form below refer to corn saleable to the merchant or miller or fit for seed, without including ‘tail’ or chicken corn. In a superb season like that of 1868 the wheats give a very trifling proportion of lean or tail corn, either for pigs or poultry; but in years of inferior growth and imperfect ripening, like the present, a large proportion of the total quantity of grain thrashed is taken out by blowing and screening, either in the finishing apparatus of the thrashing-machine or in a separate winnower. In perhaps every market in the kingdom may now be seen samples which it is a compliment to call ‘dressed corn,’ the thin, husky grains being of far worse quality than the tail wheat of a fairly good harvest. Some are so bad that only a few really good and plump kernels are distinguishable among a whole handful of the poor light stuff. So that, from quantities thrashed, an unusually large deduction has to be made to get the quantity available for sale or seed. Then, the figures in the table also make allowance for weight per bushel. That is, the aggregate crop is valued according to quantity and weight combined, and this value represented as so many imperial quarters. The same number of measured quarters will be a tenth more or less in total weight, according as the grain weighs 62 lb. per bushel (as in a good year) or only 56 lb. (as in a bad year). And, further, it is to be remembered that, while wheat of good quality may grind 75 per cent. of its weight in flour and 25 per cent. of bran, other products, and waste, wheat of poor quality may give 65 per cent., or less than that proportion, of flour. And the weight of flour obtained, which is the ultimate test of the value of a wheat crop, is taken into consideration in fixing upon the number of bushels assigned as the yield of the crop in any year. The principle borne in mind in determining the valuation is that in good years the actual produce available for food and for seed is greater than it appears; while, on the contrary, in deficient years the actual produce is less than it appears—in a year of unexampled deficiency like the present, much less than the measured quantities thrashed per acre seem to denote. In a deficient year, the total quantity of wheat available for consumption, also comes out proportionately less, in consequence of the quantity required for seed remaining the same. For example, had the 3,056,000 acres of wheat grown in the United Kingdom this year yielded 34 bushels per acre, as in 1868, the total produce would have been 12,958,000 quarters; and, for seed at $2\frac{1}{4}$ bushels per acre

(supposing an equal area to be sown for 1880) would have been deducted 855,750 quarters, or $6\frac{1}{2}$ per cent. Had it been an average crop of $29\frac{1}{2}$ bushels per acre, the total produce would have been 11,278,400 quarters; and the same deduction for seed, 855,750 quarters, would have been $7\frac{1}{2}$ per cent. And, taking the yield of 1879 at 18 bushels per acre, the total produce is only 6,846,000 quarters, and the seed—namely, 855,750 quarters, is a deduction of no less than $12\frac{1}{2}$ per cent.

“ Among the general considerations affecting the estimate of the present year's harvest is the almost unprecedented fact of at least some crops in many widely-separated parts of the country being almost worthless, sometimes offered by the growers for 1*l.* per acre, or for nothing, to anybody who would be at the expense of cutting and carting the crop off the land. Cases are very numerous in which the result from thrashing is more wretched than has been reported before in the memory of man. One farmer, after three days' thrashing by a steam machine, weighed up only 21 stones weight per acre, or six bushels per acre, weighing but 49 lb. per bushel. In the Cambridgeshire Fens there are scores of farms on which considerable sections of the wheat crop have turned out little better. A farmer lately showed in Peterborough market a sample of stuff leaner than any rye—mere shrivelled grains, comparable with some species of grass seeds—which represented the crop on 37 acres. Yields of one to an imperial quarter and a half are common, and the natural weight is so light that, where it is customary to deliver the wheat in sacks of eighteen imperial stones each, there is frequently a difficulty in making the so-called four-bushel bag hold enough for that weight. Apparently good crops are thrashing out two or two quarters and a half per acre. Another feature which tells terribly against the aggregate result is that, so far as the season has shown any favour, this is not a heavy land, but a light land year. The proper wheat soils, yielding generally by far the greatest proportion of our total wheat produce, have suffered most; and still further, it is a fact that the most bulky, long-strawed, and promising crops have been smitten most heavily with blight and mildew. Many thousands of acres of the finest wheat land in every county have completely disappointed the growers even of the poor promise which appeared just before harvest; and, if returns from many hundreds of farms were to be collected now, they would present a much more grievous picture than did those of the *Agricultural Gazette* printed in September. Yet those were very much worse than any other of the annual statements made by that journal during the whole term of its existence—only 1 per cent. of the farmers venturing to report their wheat as ‘over average,’ while 24 per cent. reckoned it as ‘average,’ and no fewer than 75 per cent. said ‘under average.’ Universally, the testimony now is that the crop was never before found so deceptive, the early thrashings revealing a degree of deficiency not apprehended at the beginning of harvest.

“ To review in some detail the condition of the various crops in different counties will require another article. Meanwhile, the resulting general estimate arrived at as the probable out-turn of

wheat in the United Kingdom for 1879 may be stated at not more than 18 bushels per acre for market and for seed, this being the net valuation after making allowances for the several considerations above-named. The following table gives the figures for fourteen years :—

Estimated Wheat Production of the United Kingdom.

Year.	Acres Sown.	Assumed Yield per Acre.		Available for Consumption after Deducting Seed.
			Bshls.	Quarters.
1866.....	3,661,000	Under average	27	11,440,000
'67.....	3,640,000	Much under average	25	10,390,000
'68.....	3,951,000	Much over average	34	15,790,000
'69.....	3,982,000	Under average	27	12,490,000
'70.....	3,773,000	Over average	32	14,100,000
'71.....	3,831,000	Under average	27	11,970,000
'72.....	3,840,000	Much under average	23	10,110,000
'73.....	3,670,000	"	25	10,550,000
'74.....	3,833,000	Over average	31	13,700,000
'75.....	3,514,000	Much under average	23	9,124,000
'76.....	3,124,000	Under average	27	9,665,000
'77.....	3,321,000	Much under average	22	9,432,000
'78.....	3,382,000	Over average	30	11,825,000
'79.....	3,056,000	Much under average	18	5,990,000
Average of 14 years }	3,612,000	Mean of 14 years	26½	11,184,000
Standard produce }	3,612,000	Bushels per acre	29½	12,053,000

"It appears that while the first five years averaged 29 bushels per acre, which is taken as about the standard or normal yield, the last five years averaged only 24 bushels; the mean yield for the 14 years being thus lowered to 26½ instead of 29½ bushels. The over-average yields were 34 bushels in 1868, 32 bushels in 1870, 31 bushels in 1874, and 30 bushels (barely exceeding an average) in 1878. The lightest yield in the series until the present year was 22 bushels in 1877, while 1875 gave only a bushel more. For 1879 our inquiries lead us to the unprecedented and pitiful yield of only 18 bushels net, which may be looked upon as two-thirds of any average in quantity, reduced by corrections for inferior quality, &c., to little over three-fifths of a normal or standard yield.

"Taking area and yield together, the progressive falling off in production is remarkable. For the first five years of the series of 14, the average number of acres of wheat in the United Kingdom was 3,801,400; in the last five years the average has been only 3,279,400 acres, a decrease of nearly 14 per cent. We produced, on an average of the first five years, 12,842,000 quarters, but on an average of the last five years only 9,207,000 quarters available for consumption after deducting seed, being a decrease of 3,635,000 quarters, or no less than 28 per cent. The produce of 1879 is reckoned only 5,990,000 quarters. And though we have taken this

as representing, like the other quantities, in the comparative series, the net quantity (quality being allowed for) available for consumption, it is necessary to bring in one more consideration which may modify and still further reduce it. This is the circumstance that when the quality is inferior, a larger proportion than usual is appropriated for the feeding of animals; and there is no doubt that, notwithstanding the counteracting effect of the rise in price, so bad is the wheat of the present year that a much greater proportion than usual will be used on the farm, instead of being sold for making bread-flour. Probably, therefore, the total produce which will be food for the people is less, and not more, than the quantity in the table.

"In the next tabular statement are arranged side by side the estimated home production and the imports with exports deducted; the two together making the total amount of wheat available for consumption in each of the thirteen years 1866 to 1878:—

Estimated Consumption and Home and Foreign Supply of Wheat for the United Kingdom.

Harvest Year, 1st September to 31st August.	Home Produce Available for Consumption.	Imports of Wheat and Flour, Deducting Exports.	Total Available for Consumption.	Average Price of British Wheat for Twelve Months, 1st July to 30th June.	
	Quarters.	Quarters.	Quarters.	s.	d.
1866-67	11,440,000	7,600,000	19,040,000	58	0
'67-68	10,390,000	9,010,000	19,400,000	69	3
'68-69	15,790,000	7,880,000	23,670,000	51	8
'69-70	12,490,000	9,580,000	22,070,000	45	11
'70-71	14,100,000	7,950,000	22,050,000	53	5
'71-72	11,970,000	9,320,000	21,290,000	55	3
'72-73	10,110,000	11,720,000	21,830,000	57	1
'73-74	10,550,000	11,230,000	21,780,000	61	3
'74-75	13,700,000	11,640,000	25,340,000	46	4
'75-76	9,124,000	13,940,000	23,064,000	46	3
'76-77	9,665,000	12,156,000	21,821,000	55	3
'77-78	9,432,000	14,508,000	21,940,000	54	0
'78-79	11,825,000	14,417,000	26,242,000	41	10
'79-80	5,990,000	18,000,000 ?	24,000,000 ?	—	
Mean of 13 years }	11,583,000	10,842,000	22,425,000	53	6

"The mean of thirteen years ending 1878-79 shows an annual home production of 11,583,000 quarters and imports 10,842,000 quarters, making the total mean consumption of wheat 22,425,000 quarters. While our home production has fallen off 28 per cent.,

comparing the first five with the last five years (in fourteen years ending 1879), the imports have hugely increased. In the first five years we imported on an average 8,404,000 quarters; but in the last five years (ending 1878-79) the quantity averaged 13,332,000 quarters per annum, or an increase of over 58 per cent. In the last two years we imported 14,508,000 and 14,417,000 quarters respectively.

“The quantity for consumption according to this estimate has varied from 19,000,000 quarters up to more than 26,000,000 quarters, the mean of 13 years being 22,425,000 quarters. For the first five years it averaged 21,246,000 quarters; for the last five years, 23,681,000 quarters per annum. Assuming that our population will need 24,000,000 quarters of wheat in the harvest year 1st September, 1879, to 31st August, 1880, we must import, according to this calculation, 18,000,000 quarters in that time, or about 3,500,000 quarters more than arrived at our ports last year or in the year before. This would be purchasing from abroad double as much wheat as we have grown at home during the present year.

“From the prices given in the last column, for periods of twelve months not very different from the harvest years, it may be computed that the average for the first five years ending 1870-71 was 55s. 7d., and for the last five years 48s. 9d. Thus, comparing the two periods, we see that farmers have had 7s. per quarter less for their wheat; and as during the last five years they grew five bushels less of it than in the first five, the diminution in the value of the crop was 2l. 15s. 5d. per acre. If they make 48s. 9d. per quarter of the present year's crop, it will realise no more than 5l. 9s. 8d. per acre; and the crops of the last five years preceding 1879 averaged only 7l. 6s. 1d. per acre. Comparing these miserable results of the last six years with the 10l. 1s. 6d. per acre made on an average of the five years ending 1870-71, when the wheat yielded normal standard crops and at the same time commanded 7s. per quarter better price, we perceive one great cause of the existing agricultural depression.”

IV.—*The Increase in the Number of Banks and Branches in the Metropolis; the English Counties; Scotland and Ireland; during the Twenty Years 1858-78, with Deductions relating to the Clearing House Returns, the Increase on the Average Annual Circulation of Bank of England, &c. By WILLIAM NEWMARCH, ESQ., F.R.S., Corr. Memb. Inst. France.*

THE following paper is taken from the *Banker's Magazine* of October, 1879 :—

“ It has appeared to me for some time past that among the class of facts most needful to be carefully collected and compared as aids and guides in the discussion of banking subjects in this country, are the facts which exhibit the increase and decrease of banks (private and joint stock), and of branches belonging to them in the metropolis, the English counties (according to character), and in Scotland and Ireland, during the last twenty years, or from 1858 to 1878.

“ I have had a strong impression that the increase in the number of banks and branches during these twenty years has been far more extensive and important than is generally supposed : but I must say that the increase shown by the detailed results of the investigation now concluded has surprised even myself, and I believe will still more surprise most of the persons who take an interest, professional or general, in these subjects.

“ As explained in the note prefixed to the tables, all the materials of the investigation have been obtained by a careful analysis of the returns of the *Banking Almanac* for each of the thirteen years 1867-79, and for the year 1859, so as to obtain the facts for the years preceding, viz., 1866-78 and 1858.

“ The tables in the appendix exhibit the results in detail, giving the names of the several banks, private and joint stock ; and, as regards provincial England, arranged in the groups of counties adopted by Mr. Dun, in his exhaustive volume of 1875.

“ I considered it important to specify the several banks, for many reasons. The tendency of late years has been to extend the facilities of banking by means of numerous branches and agencies belonging to large concerns or companies, until in some cases the branches approach a couple of hundred. It is probable that this

policy has been pushed to an extreme: but its progress and results can only be tested with accuracy by observing for a series of years the rapidity with which the branches of any particular bank have been extended: and hence the inclusion in the tables of the thirteen consecutive years, 1866-78, and the single antecedent year, 1858.

“As stated in the explanatory note, I cannot hope that the tables are free from errors, but I do not think that the errors are many; and I beg permission to assure any institution which may find the entries relating to itself not quite accurate, that nobody will regret the inaccuracy more than myself; and that its occurrence arises entirely from those many liabilities to error inseparable from the collecting, arranging, and printing of a large body of scattered material.

“For the purpose of exhibiting the general results of the inquiry, four years have been selected, viz., 1858, 1866, 1872, and 1878. The year 1866 terminated the ‘prosperity period,’ 1862-65. The year 1872 was in the middle of the ‘high-price period’ 1871-73: and 1878, it is to be hoped, will have to be regarded as the close of the ‘depressed period,’ 1874-78.

“The following three tables summarise the results for these four years, as follows:—

Table A. (1.)—Metropolitan area.

„ B. (2.)—England and Wales—
Manufacturing region.

„ C. (3.)—England and Wales—
Agricultural region.

„ „ „ Scotland.

„ „ „ Ireland.

(A).—*Metropolis. Banks and Metropolitan Branches. Four Selected Years, 1858, '66, '72, and '78, and Country Branches of London Banks.*

(1.) METROPOLITAN AREA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Metropolis—Banks and Metropolitan Branches.												Country (English) Branches of Joint Stock Banks, with Head Offices in London. Table (II.)	
Four Selected Years.	Private.		Joint Stock Banks.							Total Metropolitan, Private, and Joint Stock.			
	Clearg.	Non- Clearg.	Metropolitan. I—A.		Metropolitan and Provincial. I—C.		Indian and Foreign. D.	Total Joint Stock.		Banks.	Bchs.		
			Banks.	Bchs.	Bks.	Bchs.		Bks.	Bchs.				
1858	25	22	....	....	....	....	....	....	....	47	....	....	....
”	....	....	5	15	....	....	17	22	15	22	15	3	209
										69			
8 years	11	4	....	....	....	....	....	....	....	15	....	....	....
+ or —	....	....	2	24	4	19	34	40	43	40	43	2	72
1866	14	18	....	....	....	....	....	....	....	32	....	....	....
”	....	....	7	39	4	19	51	62	58	62	58	5	281
										94			
6 years	1	1	....	....	....	....	....	....	....	2	....	....	....
+ or —	....	....	1	11	1	15	1	1	26	1	26	1	17
1872	13	17	....	....	....	....	....	....	....	30	....	....	....
”	....	....	8	50	5	34	50	63	84	63	84	6	298
										93			
6 years	1	1	....	....	....	....	....	....	....	....	....	....	....
+ or —	....	....	1	8	....	19	6	7	27	7	27	1	96
1878	12	18	....	....	....	....	....	....	....	30	....	....	....
”	....	....	9	58	5	53	56	70	111	70	111	7	....
										100			

(B.)—*Four Selected Years, 1858, '66, '72, and '78, with Lines showing Increase and (Abstract of Tables IV,*

(2) ENGLAND AND WALES

Four Selected Years.	Liverpool (1).				Manchester (2).				Yorkshire (3).	
	Private.		Joint Stock.		Private.		Joint Stock.		Private.	
	Banks.	Brchs.	Banks.	Branches.	Banks.	Branches.	Banks.	Branches.	Banks.	Brchs.
1858	10	....	....	....	14	4	....	....	20	32
" .....	....	....	4	17	....	....	10	42	....	....
8 years.... {	....	....	....	....	....	....	....	....	....	7
+ or - .... {	....	....	2	10	....	....	1	37	....	....
1866	10	....	....	....	14	4	....	....	20	39
" .....	....	....	6	27	....	....	11	79	....	....
6 years.... {	....	....	....	....	1	....	....	....	....	6
+ or - .... {	....	....	....	4	....	....	1	39	....	....
1872	10	....	....	....	13	4	....	....	20	45
" .....	....	....	6	31	....	....	10	116	....	....
6 years.... {	4	....	....	....	1	1	....	....	2	8
+ or - .... {	....	....	1	24	....	....	2	88	....	....
1878	6	....	....	....	12	3	....	....	18	53
" .....	....	....	7	55	....	....	12	204	....	....

(C.)—*Four Selected Years, 1858, '66, '72, and '78, with Lines showing Increase and (Abstract of*

(3) ENGLAND AND WALES (AGRICULTURAL

Four Selected Years.	Cum., Westm., and Nbl'd. (5).				Midland and Eastern. (6).				Western and Southern. (7).			
	Private.		Joint Stock.		Private.		Joint Stock.		Private.		Joint Stock.	
	Banks.	Brchs.	Banks.	Brchs.	Banks.	Brchs.	Banks.	Brchs.	Banks.	Brchs.	Banks.	Brchs.
1858	9	18	....	....	86	160	....	....	74	....	....	....
" .....	....	....	6	10	....	....	16	56	....	....	18	118
8 years {	....	15	....	....	....	....	....	....	....	39	....	....
+ or - {	....	....	....	15	....	....	....	....	....	....	....	82
1866	9	33	....	....	86	190	....	....	74	110	....	....
" .....	....	....	6	25	....	....	16	62	....	....	18	200
6 years {	....	9	....	....	....	....	....	....	4	19	....	....
+ or - {	....	....	....	17	....	....	....	....	....	....	....	26
1872	9	40	....	....	83	178	....	....	70	129	....	....
" .....	....	....	9	42	....	....	16	68	....	....	18	226
6 years {	1	2	....	....	....	....	....	....	....	23	....	....
+ or - {	....	....	....	29	....	....	....	....	....	....	....	8
1878	8	38	....	....	81	210	....	....	70	152	....	....
" .....	....	....	9	71	....	....	16	75	....	....	18	234

"In the metropolis (A) the changes effected since 1858 are very striking.

"The private clearing bankers have gone down from 25 to 12, and the non-clearing from 22 to 18. The joint stock banks purely metropolitan have risen from 5 to 9: and the metropolitan branches belonging to them from 15 to 58.

"The joint stock banks which are provincial as well as metropolitan have risen from 4 to 5, and the metropolitan branches belonging to them from 19 to 53: and the provincial (English) branches belonging to them from 209 to 394.

(D.)—Four Selected Years, 1858-78. General Summary of Banks and Branches:

1	2	3	4	5	6	7	8	9	10
Four Selected Years.	Metropolis.						Provincial.		
	Private Banks.	Joint Stock Banks.					Branches of Banks with H. O. in London.	Manufacturing	
		Metropolitan.		Metro- politan and Provincial H. O.	Foreign and Colonial.	Total Offices, Metropo- litan.		Private.	
		Banks.	Metro. Branches.					Banks.	Brchs.
1858	47	....	....	....	....	87	....	45	36
” .....	....	5	15	3	17		209	....	....
8 years	15	....	....	....	....	66	....	....	7
+ or - ....	....	2	43	2	34		72	....	....
1866	32	....	....	....	....	153	....	45	43
” .....	....	7	58	5	51		281	....	....
6 years	2	....	....	....	....	25	....	1	6
+ or - ....	....	1	26	1	1		18	....	....
1877	30	....	....	....	....	178	....	44	49
” .....	....	8	84	6	50		298	....	....
6 years ....	—	....	....	....	....	35	....	7	7
+ or - ....	....	1	27	1	6		96	....	....
1878	30	....	....	....	....	13	....	37	56
” .....	....	9	111	7	56		394	....	....

Note.—In Col. 4 are included the metropolitan branches of the

"The Indian, Australian, colonial and foreign joint stock banks (head offices or branches) in London have risen from 17 to 56.

"Putting all the kinds of metropolitan banks and branches together, the increase between 1858 and 1878 is from 84 to 211,* or nearly three-fold.

"I have not space for a similar analysis of Tables B and C, but the next Tables (D and E) collect into a compact form, for the four selected years, the results of the whole inquiry.

* The National Bank has several branches in the metropolis, but its provincial branches are in Ireland.

Metropolis, England and Wales, Provincial, and Scotland and Ireland.

11	12	13	14	15	16	17	18	19	20	1
England and Wales.						England and Wales. Total Offices, Cols. (7—16).	Total Offices, Scotland, Joint Stock.	Total Offices, Ireland. Joint Stock and Private.	Total Offices, United Kingdom.	Four Selected Years.
Region.		Agricultural Region.								
Joint Stock.		Private.		Joint Stock.						
Banks.	Brchs.	Banks.	Brchs.	Banks.	Brchs.					
....	....	169	249	....	....	} 1,212	....	6	} 2,008	1858
48	145	....	....	40	184		609	181		„
....	....	....	84	....	....	} 414	....	—	} 580	8 years
3	79	....	....	—	103		104	62		+ or —
....	....	169	333	....	....	} 1,626	....	6	} 2,588	1866
51	224	....	....	40	287		713	243		„
....	....	7	14	....	....	} 154	....	—	} 336	6 years
1	48	....	....	3	49		99	84		+ or —
....	....	162	347	....	....	} 1,780	....	6	} 2,924	1877
50	272	....	....	43	336		812	327		„
....	....	3	53	....	....	} 415	....	—	} 630	6 years
3	188	....	....	—	44		138	76		+ or —
....	....	159	400	....	....	} 2,195	....	6	} 3,554	1878
53	460	....	....	43	380		950	403		„

Metropolitan, and also metropolitan and provincial joint stock banks.

“In the next Table (E) a summary is given of the more complete analysis of the preceding Table (D):—

(E.)—Summary of Table (D), 1858-78. Additions

1	2	3	4	5	6	7	8	9	10
From Years 1858-78.	Metropolis.				England and Wales				
	Private Banks.	Joint Stock Banks and Branches.			Branches of Banks, H. O. London.	Manufacturing Region.			
						Private.		Joint Stock.	
		Met.	M., P., and For.	Total.		Banks.	Brchs.	Banks.	Brchs.
1858..... {	47	....	....	87	....	45	36	....	....
	....	20	20		209	....	....	48	145
8 years, '58-66	15	45	36	66	72	....	7	3	79
6 „ '67-72	2	27	....	25	18	1	6	1	48
6 „ '73-78	....	28	7	35	96	7	7	3	188
1878..... {	30	....	....	213	....	37	56	....	....
	....	120	63		394	....	....	53	460

“The three lines of figures relating to the increase and decrease of each of the three intervals of eight, six, and six years enable us to see plainly that the period of least increase was 1867-72, and the period of greatest increase 1873-78.

“In the England and Wales manufacturing region the private banks fell from 45 to 37, and their branches rose from 36 to 58: while the joint stock banks in the same region added five to the number of banks (48—53), but 315 (145—460) to the number of branches, in both classes of banks the increase being wholly in branches. It is very remarkable that the increase of joint stock branches in the three periods should be 79, 48, and 188; or in the six years 1873-78—an increase in the number of branches far exceeding the twelve years 1858-72.

“In the England and Wales agricultural region, the private banks have sustained themselves as the predominant description of banks. The private head offices have fallen from 169 to 159; but the branches belonging to them have increased by 151 (249—400). The joint stock banks have increased only by 3 (40—43), but their branches by 196 (184—380).

“In Scotland the greatest increase of branches was during the six years 1873-78, and the facts are nearly the same in Ireland.

“The figures of increase in the three periods have been:—

or Diminutions of the Three Intervals.

11 12 13 1 15					16 17		18	1	
and Provincial.					Total Offices in		Total Offices United Kingdom.	From Years 1858-78.	
Agricultural Region.				Total Offices England and Wales.	Scotland.	Ireland.			
Private.		Joint Stock.							
Banks.	Branches.	Banks.	Branches.						
169	249	....	....	} 1212	609	187	2008	1858
....	....	40	184					
....	84	103	414	104	62	580		8 years, '58-66
7	14	3	49	154	99	84	336		6 ,, '67-72
3	53	44	415	138	76	630		6 ,, '73-78
159	400	....	....	} 2195	950	403	3554	1878
....	....	43	380					

(F.)—*Figures of Total Increase, 8, 6, 6 Years, 1858-78.*

Areas.	1858-66. 8 Years.	1867-72. 6 Years.	1872-78. 6 Years.	Total, 20 Years.
Metropolis	66	25	35	126
Branches with H. O. London.....	72	18	96	186
England and Wales manufacturing „ agricultural	138	43	131	312
	89	54	191	334
	187	59	94	340
Scotland	414	156	416	986
	104	99	138	341
Ireland	518	255	554	1,327
	62	84	76	222
	580	339	630	1,549

“It is fairly open to question whether the process of branch extension exhibited by these figures, especially by the increase of 630 banks in the six years 1872-78, has not been too rapid to be profitable or solid, or perhaps in some cases prudent. But such an inquiry could only be answered by a systematic tabulation of balance-sheets, showing deposits, expenses, &c.: and there are no public means of applying such a test.

“There are certainly good grounds for believing that during the last fifteen years the accumulation of deposits in banks bearing interest has been faster than the growth of sound banking securities upon which such deposits could be employed, so as to leave a sufficient margin of profit to cover trouble and risk; and when we find (Table E) that the number of banking offices in England and Wales has been increased from 1,212 in 1858: and from 1,626 in 1866: to 2,195 in 1878, or nearly double in twenty years, there is reason to infer that banks have been running after deposits with the offer of advancing terms on the one hand: and after active and borrowing accounts with too keen an appetite, on the other.

“There have been three careful compilations and estimates of the total financial resources (capital and deposits) wielded by the banks and discount houses of the United Kingdom, viz., by myself in 1851: by Mr. R. H. Inglis Palgrave in 1871: and by Mr. John Dun in 1874.

“Mr. Palgrave and Mr. Dun had the command of better means of information than I had in the early days of 1851, and every one will admit that the qualifications of Mr. Palgrave and Mr. Dun for the performance of the task they undertook are of the very highest.

“The following Table (G), founded chiefly on Mr. Dun (*Banking Statistics*, p. 121) may be here introduced:—

Description.	1850.		1871.		1874.		Proportions.					
	NEWMARCH. (Mln. £.)		PALGRAVE. (Mln. £.)		DUN. (Mln. £.)		N. 1850.		P. 1871.		D. 1874.	
London banks.....	64		174		234		Per	Per	Per	Per	Per	Per
Country banks, England and Wales	97	161	210	384	256	490	25	26	26	30	30	
Bank of England	36		67		70		37	32	58	33	63	
London discount houses	10	46	78	145	68	138	14	10	9	8	17	
Total, England and Wales	36	207	92	529	106	628	4	12	22	14	80	
Scotch banks	36	36		92		106	14	14	14	14	14	
Total, Great Britain	17	243	41	621	48	734	94	6	94	6	94	
Irish banks		17		41		48	6	6	6	6	6	
Million £		260		662		782					100	100
<i>England and Wales—</i>												
Number of banks and branches	962		1,651	£	1,885	£						
average resources	—	215,000	—	320,000	—	333,000						
Population to one office	18,700	—	13,500	—	12,600	—						
Banking resources per head of population.....	—	11	—	23	—	27						
<i>Scotland—</i>												
Number of banks and branches	400		780	—	862	—						
average resources	—	90,000	—	116,000	—	120,000						
Population to one office	7,000	—	4,300	—	4,100	—						
Banking resources per head of population.....	—	12½	—	27	—	30						
<i>Ireland—</i>												
Number of banks and branches	170		327	—	354	—						
average resources	—	100,000	—	125,000	—	137,000						
Population to one office.....	40,000	—	17,000	—	15,000	—						
Banking resources per head of population £.....	—	2½	—	7½	—	9						

Compared with the 333,000l. of England and Wales, the average resources of the Scotch bank office is equal to 34 per cent.; and of the Irish bank offices to 41 per cent.

“The results of this display of figures are of the most striking character. For example:—

(Ga.)—*Total Resources of Banks, 1850-71 and 1874. Mln. £.*

Particulars.	1850.	1871.	1874.	Proportion.		
				Per cent.	Per cent.	Per cent.
England and Wales.....	£ 207	£ 529	£ 628	80	80	80
Scotland.....	36	92	106	14	14	14
Ireland	243	621	734	94	94	94
	17	41	48	6	6	6
Mln. £	260	662	782	100	100	100
Banking resources per head of population—	£	£	£			
England and Wales.....	11	23	27	—	—	—
Scotland	12½	27	30	—	—	—
Ireland	2½	7½	9	—	—	—

“The steadiness of the relative percentages of the three divisions of the country is very remarkable through the twenty-four years (viz. 80, 14, 6, = 100), and seems to indicate the free play of natural causes acting in the several divisions of the United Kingdom according to the industries and aptitude of each population.

“The returns of the clearing-house are hardly to be understood until tested by the total number of bank offices in the United Kingdom.

“The London clearing-house balances are the ultimate settlement of the operations originating among the banking offices, large and small, of the whole United Kingdom. Such local clearings as have prevailed for some years in Edinburgh, Dublin, Manchester, Liverpool, and most of the large towns, tend, of course, to diminish the London figures, and on perfectly desirable grounds; and a service would be rendered by any one who would collect and discuss the evidence afforded by the amount and progress of these local clearings. Still, the fact remains that the aggregate of the London clearing figures for any twelve months is the aggregate of the total clearings of each existing bank office in relation with it; hence the following table (I) :—

(I).—*Clearing House Annual Tables compared with the Number of Branch Offices in the United Kingdom at Three Periods, 1867-68, 1872-73, and 1878-79.*

1	2	3	4 5		6 7		8 9	
Twelve Months ended 30th April, 1868, '73, '79.	Stock Exchange Settlements.	Number of Branch Offices in United Kingdom.	Fourth of Month.		Rest of Clearing.		Total Clearing, including S. E. Settlements.	
			Clearing.	Average per Branch Office.	Clearing.	Average per Branch Office.	Amount.	Average per Branch Office.
	Mln. £	No.	Mln. £	£	Mln. £	£	Mln. £	£
1867-68	444	2,640	147	55,000	2,666	1,000,000	3,257	1,230,000
'72-73	1,032	2,924	266	90,000	5,705	1,950,000	6,003	2,050,000
'78-79	811	3,554	212	60,000	3,862	1,080,000	4,885	1,370,000

Note.—The figures of the Clearing were first given for the twelve months ended 30th April, 1868.

“The test columns in this table are columns 5, 7, 9. The column 5 gives the average annual clearing of the ‘fourth of the month’ for each branch office. In 1876-78 the figures were 55,000*l.* per office; in 1872-73 it had nearly doubled, and was 90,000*l.*; but in 1878-79 it had fallen to 60,000*l.* These figures fully coincide with what is known of the variations of trade and prices.

“The column 7 gives the similar average annual clearing per office for general business apart from fourths and Stock Exchange settlements; and in this column for the three years the figures are in million pounds, 1·00, 1·95, and 1·08, or fully in accord with the evidence of column 5.

“In columns 8 and 9 the Stock Exchange settlements are included, but they need not be discussed.

“Similarly the increase of the number of bank offices explains almost wholly the increase in the average annual note-circulation of the Bank of England since 1858, as shown in the next table (K) :—

(K).—1858, 1866, 1872, and 1878. *Increase of the Average Annual Circulation of Bank of England, and Increase of Total Bank Offices in United Kingdom.*

1	23		4567				Differences.	
Years.	Bank of England.		Total Bank Offices in United Kingdom.				Cols. 3—7.	
	Average Annual Circulation.		Bank Offices.		Estimated Average Bank Notes per Office.			
	Mln. £	£	No.	No.	£	Mln. £	Mln. £	Mln. £
1858....	21·90		2,008					
'66....	24·40	2·50	2,588	580	3,000	1·74	0·76	2·50
'72....	26·00	1·60	2,924	336	„	1·10	0·50	1·60
'78....	28·50	2·50	3,554	630	„	1·90	0·60	2·50
		6·60		1,546		4·74	1·86	6·60

"The steady rise of the Bank of England note-circulation from, say, 22 to $28\frac{1}{2}$ millions has excited much discussion. Such an increase of notes was not consistent with the known large increase in the keeping of banking accounts and in the diffusion of bank offices. If, however, we assume, as is done in (K), that the new bank offices, shown in column 5, keep on the average no larger a sum than 3,000*l.* in Bank of England notes, we are able to account at once for 4·74 million pounds out of the total increase of 6·60 millions, leaving an unascertained margin of only 1·86 millions—that is to say, a sum most probably all absorbed in the larger bank note reserves of older bank offices.

"The increase of 1,546 bank offices explains the enormous increase of the country cheque clearing, and the consequent economising of Bank of England notes and coin in relation to the prodigious increase in the volume of the total transactions of the country, and the rapidity with which the settlement of them is effected. The natural and wholesome progress of monetary economics in a country of free institutions and free industry is this—first, coin supersedes barter; second, bank notes and bills of exchange greatly and continuously replace coin; third, banking accounts and cheques greatly and continuously supersede bank notes and bills of exchange; so that the natural and inevitable tendency in a country like the United Kingdom is to render bank ledgers the ultimate means of settling transactions, and a central reserve of coin in London—very minute indeed, compared with the functions it performs—the sustaining force of the whole system; and it is the variations in the sufficiency of this force which, through the rate of discount, affects all banking operations.

"With the fact of the total number of bank offices in the United Kingdom ascertained, it is possible to form an estimate of the number of persons (managers, cashiers, accountants and clerks) employed. It is probably under the truth to estimate that on the average four persons are employed in each of the 3,554 bank offices, or a total of 14,216 persons, and if we assume that, on the average, three persons (wives, children, parents, sisters, &c.) are dependent on each person employed, the result is 42,648 dependent persons to be added to the 14,216, or together, 56,864.

"It only remains for me to introduce the summary tables (L.) and (M), to be followed by the detailed tables (I) to (XI); first, directing attention to the explanatory note:—

(L.)—*Summary Table 1866-78 and Year 1858, Banks and Branches, Private and Joint Stock, Metropolitan, and Metropolitan and also Provincial. (Tables I and II.)*

Year.	Banks and Branches—Metropolis.						Total Metropo- litan Private and Joint Stock.	Country Branches of Banks with Head Office in London.
	Private Banks.		Joint Stock Banks.					
	Clearing.	Non- Clearing.	Metro- politan.	Met. and Provincial.	Indian and Foreign.	Total Joint Stock.		
1878 {	12	18 ....	.... 58	.... 53	.... 56	.... 167	.... 197	.... 394
'77 {	13	18 ....	.... 57	.... 60	.... 56	.... 173	.... 204	.... 342
'76 {	13	18 ....	.... 56	.... 58	.... 56	.... 170	.... 201	.... 337
'75 {	13	18 ....	.... 54	.... 55	.... 55	.... 164	.... 195	324
1874 {	13	18 ....	.... 53	.... 43	.... 53	.... 149	.... 180	.... 319
'73 {	13	17 ....	.... 51	.... 36	.... 54	.... 141	.... 171	.... 312
'72 {	13	17 ....	.... 50	.... 34	.... 50	.... 134	.... 164	.... 298
'71 {	13	17 ....	.... 48	.... 31	.... 44	.... 123	.... 153	.... 299
'70 {	13	17 ....	.... 48	.... 25	.... 44	.... 117	.... 147	.... 268
'69 {	13	17 ....	.... 45	.... 25	.... 41	.... 111	.... 141	.... 268
'68 {	13	17 ....	.... 40	.... 24	.... 37	.... 101	.... 131	.... 281
'67 {	13	18 ....	.... 40	.... 23	.... 50	.... 113	.... 144	.... 275
'66 {	14	18 ....	.... 39	.... 19	.... 51	.... 109	.... 141	.... 281
1858 {	25	22 ....	.... 15	.... ....	.... 17	.... 32	.... 79	.... 209

(M.)—*Summary Table 1866-78 and Year 1858, (a) Manufacturing and Commercial Districts and Centres (Branches). (Tables IV, V, VI, VIII.)*

Year.	Liverpool. IV.		Manchester. V.		Yorkshire. VI.		Staffordshire. VIII.		Total.	
	P.	J. S.	P.	J. S.	P.	J. S.	P.	J. S.	P.	J. S.
1878 {	6	....	3	....	53	....	....	....	62	....
	....	55	....	204	....	121	....	80	....	462
'77 {	6	....	4	....	53	....	....	....	63	....
	....	53	....	187	....	115	....	76	....	432
'76 {	6	....	4	....	52	....	....	....	62	....
	....	49	....	170	....	112	....	76	....	408
'75 {	6	....	4	....	49	....	....	....	59	....
	....	45	....	160	....	111	....	70	....	387
1874 {	5	....	4	....	44	....	....	....	53	....
	....	38	....	151	....	90	....	67	....	347
'73 {	5	....	4	....	44	....	....	....	53	....
	....	33	....	132	....	86	....	46	....	298
'72 {	5	....	4	....	45	....	....	....	54	....
	....	31	....	116	....	81	....	44	....	273
'71 {	5	....	4	....	46	....	....	....	55	....
	....	28	....	106	....	80	....	43	....	258
'70 {	5	....	4	....	47	....	....	....	56	....
	....	27	....	100	....	80	....	43	....	251
'69 {	5	....	4	....	41	....	....	....	50	....
	....	28	....	95	....	77	....	42	....	243
'68 {	5	....	4	....	40	....	....	....	49	....
	....	27	....	94	....	75	....	42	....	239
'67 {	3	....	4	....	39	....	....	....	46	....
	....	27	....	85	....	76	....	41	....	230
'66 {	6	....	4	....	39	....	....	....	49	....
	....	27	....	79	....	77	....	41	....	225
1858 {	5	....	4	....	32	....	....	....	41	....
	....	17	....	42	....	73	....	13	....	139

(b.)—*Chiefly Agricultural Districts. (Tables III, VII, IX, X, and XI.)*

Year.	Cumber- land.		Midland and Eastern.		Western and Southern.		Totals.		Scotland.		Ireland.	
	P.	J. S.	P.	J. S.	P.	J. S.	P.	J. S.	P.	J. S.	P.	J. S.
1878	38	....	210	....	152	....	400	....	....	....	....	....
'77	39	71	211	....	143	234	393	380	....	939	....	403
'76	39	69	202	75	140	283	381	427	....	940	....	398
'75	39	68	197	73	140	265	376	406	....	923	....	376
	64	....	73	....	253	....	390	....	897	....	364	....
1874	36	....	184	....	132	....	352	....	....	....	....	....
'73	36	50	182	70	128	252	346	372	....	862	....	354
'72	40	46	178	68	129	243	347	357	....	835	....	339
'71	39	42	177	68	124	226	340	336	....	801	....	327
'70	36	32	177	62	119	218	332	312	....	779	....	361
'69	35	31	188	62	118	216	341	309	....	768	....	329
'68	34	30	190	62	116	216	340	308	....	747	....	277
'67	33	28	191	64	114	213	338	305	....	736	....	272
'66	33	28	190	64	110	205	333	297	....	718	....	252
	25	....	62	....	200	....	287	....	702	....	243	....
1858	18	....	160	....	71	....	249	....	....	....	....	....
	10	....	56	....	118	....	184	....	598	....	172	....

NOTE.—*Explanatory of the Construction of the Tables.*

"1. The materials of all the tables have been obtained by a careful examination of the lists given in the annual returns of the *Banking Almanac*, assuming, of course, the volumes of each year forward as giving the facts of the year preceding, *e.g.*, the almanac for 1879 gives, of course, the facts as they existed in the course of the preceding year, 1878.

"2. In the case of the metropolis, five classes of banks have been carefully distinguished—Tables (A) (L).

"(1.) Private Clearing Banks.

"(2.) Private Non-Clearing Banks.

"(3.) Joint Stock Banks, wholly Metropolitan as regards Head Office and Branches.

"(4.) Joint Stock Banks, with Head Office and some branches in Metropolis, but also with branches in the Provinces.

"(5.) Joint Stock Banks, Indian, Australian, Colonial and Foreign, with Head Office or branches in Metropolis.

"There is also given as an important class of facts the number of country branches belonging to joint stock banks with *head offices* in London.

"3. As regards the provincial portions of England and Wales, and as regards Scotland and Ireland, the territorial divisions adopted with great success by Mr. Dun in his exhaustive volume of 1876 (*British Banking Statistics, being paper read before Statistical Society, December, 1875: E. Stanford, London*) have been followed. There can be no profitable discussion of banking statistics except upon the plan of a sound territorial division, answering, as far as possible, to the leading industries: and when once such a division has been adopted by inquirers so fully competent as Mr. Dun, it is in a manner incumbent upon writers who come after him to adhere to it.

"4. In the territorial Tables (III) to (XI^A) the joint stock banks are separated from the private banks, and the figures given under the years 1878-66 and for 1858 represent the *branches* belonging to the several banks, joint stock and private, the titles of which are set forth. For example: Table III.—Cumberland, &c. There were in 1878—

"Joint Stock Banks	Head Offices	9	Branches	71	Total,	80
"Private Banks,	"	10	"	38	"	48
		<hr/> 19		<hr/> 109		<hr/> 128

"Where there are no branches four points (....) indicate the existence of the head office: and where the bank has not existed in some of the years 1878-66, or in 1858, the blank is indicated by a line (—).

"5. It is believed that in Tables (B) (C) (D) a true summary is given of the head offices and branches of the territorial divisions. There is a constant difficulty in the almanac lists of every year in distinguishing between private partnerships, which are not really banks but discount and exchange agencies.

"6. I am afraid, notwithstanding all the care exercised by myself and the very excellent assistant, to whom I am much indebted for great pains in the tedious work of compiling the figures from the many volumes of the *Banking Almanac*, it is almost certain that there are several omissions and errors in the tables; still I do not think they are very material or in the least impair the general value of the evidence collected. It is possible that before the almanac for 1881 has to be printed, most of the errors will be discovered and, of course, corrected.

(I.)—*Metropolitan District. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'53.
A. (10.)														
Bank of England	1	1	1	1	1	1	1	1	1	1	1	1	1	1
London and Westminster	7	7	7	7	7	7	7	7	7	7	7	7	7	6
„ Joint Stock	5	5	5	5	5	5	5	4	4	3	2	2	2	1
„ and County	27	26	25	25	24	24	24	23	23	23	22	22	22	4
Union	4	4	4	4	4	4	4	4	4	3	3	3	3	3
City	6	6	6	5	5	4	3	3	3	3	3	3	3	...
Imperial	2	2	2	2	2	2	2	2	2	1	1	1	...	...
Consolidated	1	1	1	1	1	1	1	1	1	1	1	1	1	...
Metropolitan .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Central	5	5	5	4	4	3	3	3	3	3	...	...	...	...
	58	57	56	54	53	51	50	48	48	45	40	40	39	15
B.														
Private banks, clearing....	12	13	13	13	13	13	13	13	13	13	13	13	14	25
„ Non-clearing	18	18	18	18	18	17	17	17	17	17	17	18	18	22
	88	88	87	85	84	81	80	78	78	75	70	71	71	62
C. (5.)														
National Provincial	4	4	4	4	4	3	3	3	3	3	3	3	1	...
National	7	7	7	7	7	7	7	7	7	7	7	5	5	...
London and South-Wstrn.	31	31	29	27	22	17	17	15	13	13	12	13	12	...
„ Provincial	16	15	15	14	7	7	5	4	...	...	...	...	...	...
Scotch banks	5	3	3	3	3	2	2	2	2	2	2	2	1	...
	53	60	58	55	43	36	34	31	25	25	24	23	19	...
D.														
Indian banks	8	8	8	7	7	7	7	7	7	7	7	12	14	5
Australian	15	15	15	15	14	14	14	15	14	13	13	14	13	6
Other Colonial	7	7	7	7	6	6	7	6	6	6	5	6	6	2
Foreign	26	26	26	26	26	27	22	16	17	15	12	18	18	4
	56	56	56	55	53	54	50	44	44	41	37	50	51	17
General totals.....	197	204	201	195	180	171	164	153	147	141	131	144	141	79

(II.)—*Country Branches of Banks with Head Offices in London.*

Banks. (7.)	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Bank of England	9	9	9	9	9	9	9	9	9	9	9	9	9	11
London and County	128	128	126	124	124	124	123	123	122	122	126	125	125	94
National Provincial	141	140	138	132	133	133	131	129	129	129	131	128	127	104
London and Scottish.....	4	4	4	4	4	6	5	7	7	7	14	12	18	...
„ Provincial.....	58	58	57	52	47	39	29	30	...	...	...	...	...	...
Consolidated	3	3	3	3	2	1	1	1	1	1	1	1	1	...
Capital and Counties.....	51	...	...	...	...	...	...	...	...	...	...	...	...	...
	394	342	337	324	319	312	298	299	268	268	281	275	281	209

(III.)—*Cumberland, Northumberland, and Westmoreland. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58
Carlisle City and Dist.	6	6	6	6	4	4	4	3	3	3	3	3	3	1
„ & Cumbld. B. Co.	6	6	6	5	5	5	5	5	5	5	4	4	4	2
Cumbld. Union Bk., Lim.	21	20	19	17	17	16	16	15	15	15	15	14	14	5
Bk. of Whitehaven, Lim.	5	4	4	4	1	3	3	2	2	2	2	2	2	1
Whitehaven Joint Stock	5	5	5	5	5	5	5	5	5	4	3	3	2	1
Bank of Westmoreland....	1	1	1	1	1	1	1	2	1	1	1	2	—	—
North East. Bg. Co., Lim.	26	26	26	25	16	12	8	—	—	—	—	—	—	—
Indust. Bk., L., Newcastle	....	....	....	....	....	....	....	—	—	—	—	—	—	—
North Co. B., Lim., Nstle.	1	1	1	1	1	....	....	—	—	—	—	—	—	—
<i>Totals 9 jnt. stk. bks....</i>	<i>71</i>	<i>69</i>	<i>68</i>	<i>64</i>	<i>50</i>	<i>46</i>	<i>42</i>	<i>32</i>	<i>31</i>	<i>30</i>	<i>28</i>	<i>28</i>	<i>25</i>	<i>10</i>
Dickinson and Co., Alston	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wilson and Co., Alfreton	....	....	....	....	....	....	....	....	....	....	....	....	....	....
W. H. Logan, Berwick ....	....	2	2	2	2	2	2	2	2	2	2	2	2	....
Wakefield and Co., Kendal	10	10	10	8	9	8	8	8	8	8	7	7	7	4
Mackie and Co., Carlisle	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lambton & Co., Newcastle	11	11	11	10	9	10	10	10	9	9	9	9	9	6
Woods and Co., „	10	10	10	12	8	9	8	7	7	7	7	6	6	6
Hodgkin and Co., „	7	6	6	7	8	7	7	6	6	5	5	5	5	....
W. Dickson, Alnwick	—	—	—	—	—	—	5	5	4	4	4	4	4	....
J.M.Head and Co., Crlisle.	—	—	—	—	—	—	—	—	—	....	....	....	....	2
<i>Totals 10 private banks</i>	<i>38</i>	<i>39</i>	<i>39</i>	<i>39</i>	<i>36</i>	<i>36</i>	<i>40</i>	<i>39</i>	<i>36</i>	<i>35</i>	<i>34</i>	<i>33</i>	<i>33</i>	<i>18</i>
General totals.....	109	108	107	103	86	82	82	71	67	65	62	60	58	28

(IV.)—*Liverpool.* (*Branches.*)

[illegible]

(V.)—*Manchester District. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Man. & L'pool. Dist. Bk.	54	54	51	51	51	45	41	40	38	38	38	37	36	29
Man. and County, Lim.	34	32	30	29	26	24	22	16	15	15	15	14	12	—
Manchester and Salford	16	14	8	8	8	7	8	8	8	8	7	5	3	3
Union Bank of Man., L.	27	27	24	19	20	16	12	11	9	7	7	3	3	1
Man. Joint Stock, Lim.	1	1	1	1	1	—	—	—	—	—	—	—	—	—
Lan. and York. Bk., Lim.	16	12	13	11	8	5	—	—	—	—	—	—	—	—
Lancaster Banking Co.	21	16	16	14	13	13	13	13	13	13	13	12	12	3
Preston Banking Co.	10	8	6	6	6	6	6	6	6	6	6	6	6	3
Parr's Banking Co., Lim.	20	18	18	18	16	14	12	10	10	7	7	7	6	3
Bank of Bolton	4	4	3	3	2	2	2	2	1	1	1	1	1	....
Bury Banking Co. ....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rochdale Joint Stock	1	1	....	....	....	....	....	....	....	....	....	....	....	....
Ashton, St'lybr., &c., Bk.	—	—	—	—	—	—	—	....	....	....	....	....	....	....
<i>Totals 13 jnt. stk. bks.</i>	204	187	170	160	151	132	116	106	100	95	94	85	79	42
Cunliffes and Co., Man.	3	3	3	3	3	3	3	3	3	3	3	3	3	3
John Stuart and Co., Man.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Heywood and Co., „	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Loyd, Entwistle and Co.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hardcastle and Co., Bltn.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
J. Sewell and Nephew, M.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Robinson and Co., Man.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lomas & Co., Manchester	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Miller, R. D., „	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nash and Sons, „	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clem't, R'yds. & Co., R.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fenton & Sons, Rochdale	—	1	1	1	1	1	1	1	1	1	1	1	1	1
Rbtson, Fr'ser & Co., M.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
W. Connor .....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
<i>Totals 14 private banks</i>	3	4	4	4	4	4	4	4	4	4	4	4	4	4
General totals	207	191	174	164	155	136	120	110	104	99	98	89	83	46

(VI).—Yorkshire. (Branches.)

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58
Darlington Dist. Bank	7	7	7	7	6	6	6	6	6	6	6	6	7	5
Swaledale, &c., Bg. Co.	4	4	4	4	3	3	3	4	4	3	3	3	3	3
Knresbro. & Clare B. Co.	6	6	6	6	6	6	6	6	6	6	6	6	7	7
Yorkshire Bg. Co.	24	23	23	23	21	21	21	21	21	21	20	20	20	20
York City and Coy. Bank	23	19	18	17	14	13	11	10	10	10	10	10	10	8
„ Union Bg. Co.	10	10	9	9	9	9	9	8	8	8	8	8	8	8
Hull Bg. Co.	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Bank of Leeds, L. ....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Leeds and Coy. Bank, L.	5	5	5	5	5	5	5	5	5	5	5	5	3	.....
Exch. and Dis. Bk. Leeds .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bradford Coml. Bg. Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ Bg. Co. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ Dist. Bank, L.	1	1	1	1	1	1	1	1	1	1	1	1	.....	.....
„ Old Bank, L.	10	9	9	9	2	2	2	2	.....	.....	.....	.....	1	.....
Halifax Joint Stk. Bank	2	2	2	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ Cml. Bg. Co. L.	3	3	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ & Hdrsfild Un. B.	1	1	1	1	1	1	1	1	1	1	.....	1	1	1
Huddersfield Bg. Co.	4	4	4	4	3	3	3	3	3	3	3	3	3	11
West Riding Un. Bank.	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Wakefield & Brnsly U. B.	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Barnsley Bg. Co.	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sheffield Union Bg. Co.	5	5	5	5	2	2	1	1	1	1	1	1	2	1
„ & Rothrm. B. C.	4	4	4	4	4	4	3	3	3	3	3	3	3	3
„ Bg. Co.	3	3	3	3	3	3	2	2	2	2	2	2	2	1
„ & Hallamsh. Bk. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Totals 25 jt. stk. bks.</i>	121	115	112	111	90	86	81	80	80	77	75	76	77	73
Beckett and Co., Beverley	7	7	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
„ Leeds.	8	8	8	8	7	6	6	6	7	1	1	1	1	1
Bower and Co., Beverley	—	—	—	—	4	4	4	4	4	4	4	4	4	4
Pease and Co., „ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Backhouse & Co., Drlgtn.	16	16	15	12	12	11	12	12	12	13	13	12	12	11
E. Smith & Co., Gt. Gmsb. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
S. Smith Bros. & Co., Hull	2	2	2	2	2	2	2	2	2	2	2	2	2	.....
T. & R. Raikes & Co., „ .....	—	—	—	—	—	—	—	—	.....	.....	.....	.....	.....	.....
Harrison and Co., Knarsb.	3	4	4	4	4	4	4	4	4	4	4	4	4	3
Williams and Co., Leeds .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilkinson and Co., „ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bagley and Co., „ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. Holmes and Co., „ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Roper & Co., Rehm., Yks. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Woodall and Co., Scarb. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birkbeck and Co., Settle.	11	10	10	11	11	13	12	14	14	13	12	12	12	11
Dale, Young & Co., S. Sds.	2	2	2	2	2	2	2	2	2	2	2	2	2	.....
Leatham & Co., Wakfild.	3	3	3	3	2	2	2	2	2	2	2	2	2	2
Simpson and Co., Whitby .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Swan, Clough & Co., Yk. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Totals 20 private banks</i>	53	53	52	49	44	44	45	46	47	41	40	39	39	32
General totals.	174	168	164	160	134	130	126	126	127	118	115	115	116	105

(VII).—*Midland and Eastern Counties. Agricultural. (Branches.)—Contd.*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Webb and Co., Ledbury	....	....	....	....	....	....	....	....	....	....	....	....	....	....
F. W. Jennings, Leek	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Paget and Co., Leicester	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Bassett & Co., Leig. Buz.	6	6	6	6	6	6	6	6	6	6	6	6	6	3
Smith and Co., Lincoln	7	7	7	7	6	6	6	6	6	6	6	6	6	6
Mid'ton and Co., Loughb.,	—	....	....	....	....	....	....	....	....	....	....	....	....	....
Jarvis & Jarvis, Kgs. Lynn	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gurney & Co., Lynn Regis	5	5	5	5	3	3	3	3	3	3	3	3	3	3
Brockleh't and Co., Macc.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
S. Smith and Co., Mansfd.	2	2	2	2	2	1	1	2	....	....	....	....	....	....
Downes and Co., Nantw.	2	2	2	2	3	3	2	2	2	2	2	2	1	....
Robinson and Co., Mansf.	—	—	—	—	—	—	—	—	2	2	2	2	2	2
Handley and Co., Newark	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Godfrey and Co., "	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Slowcock and Co., Newby	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hammond & Co., Newm.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gurney and Co., Norwich	23	23	23	22	21	21	21	21	21	6	8	8	8	5
Harvey & Hudson, "	—	—	—	—	—	—	—	—	—	31	31	29	28	22
Wright & Co., Nottingham	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hart and Co., "	....	....	....	....	....	....	....	....	....	....	....	....	....	....
S. Smith and Co., "	6	6	6	6	1	1	....	....	....	....	....	....	....	....
Dingley and Co., Okehmp.	3	3	3	3	3	3	3	3	3	3	3	3	3	4
Croxon and Co., Oswestry	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Parsons and Co., Oxford	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Undershells, Ox. U. & C.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wootten & Co., Ox. U. & C.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fordham and Co., Ruston	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Butler and Sons, Rugby	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Curteis and Co., Rye	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gibson & Co., Saffn. Wn.	3	3	2	2	2	2	2	2	2	2	2	2	2	2
Rooke & Co., Shrewsbury	4	4	4	4	3	3	3	3	3	3	3	3	3	3
Burton and Co., "	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Beck and Co., "	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Peacock and Co., Sleaford	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ashby and Co., Staines	5	5	5	4	2	2	2	2	2	2	2	2	2	1
Eaton and Co., Stamford	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Smith & Co., St. Albans	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lechm're and Co., Tewkes.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Harwood & Co., Thornb.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eland and Eland, Thrpst.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Whitw'th and Co., Twetr.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Percival and Mercer, "	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Butcher and Son, Tring.	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Greenway and Co., Wreck.	2	2	2	2	2	2	2	2	2	2	2	2	2	1
Gurney and Co., Wisbech	7	7	7	6	6	6	6	6	6	6	6	6	6	6
Clinch and Sons, Witney	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lechmere and Co., Wore.	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Wheeler and Co., H. Wye.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gurney & Co., Yarmouth	12	13	13	13	13	13	13	11	11	9	9	9	9	9
Lacon and Co., "	7	7	7	7	7	7	7	7	7	4	4	4	4	4
<i>Totals 86 private banks</i>	210	211	202	197	184	182	178	177	177	188	190	191	190	160
General totals	285	286	275	270	254	250	246	239	239	240	254	255	252	216

(IX.)—*Western and Southern Counties. (Branches.)—Contd.*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Dunsford and Co., Tivrtn.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vivian and Co., Torquay	....	....	....	....	....	....	....	....	....	....	....	....	....	....
B'ehing and Co., Tunbge.	5	5	5	5	5	4	3	3	3	3	3	3	3	....
H'll, Sm'h and Co., Uxbg.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hedges and Co., Wlngfd.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Fox, Brs. and Co., Wlngt.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eliot and Co., Weymuth.	4	3	3	3	3	3	3	3	3	3	3	3	3	2
Bullp't and Hall, Wnchr.	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Deane and Co., Winchst.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
N'vile, R'd and Co. Wnsr.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
W. Hancock, Wivlseme.	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Henty and Co., Worthing.	5	5	5	5	5	5	5	5	5	5	5	5	5	4
Willyams and Co., Truro	3	2	2	2	2	2	2	2	2	2	2	2	2	2
Tw'dy, Wms. and Co., „	5	5	5	5	5	5	5	4	4	4	4	4	3	3
<i>Totals 74 private bks.</i>	152	143	140	140	132	128	129	124	119	118	116	114	110	71
„ 18 <i>jnt. stk. bks.</i>	234	283	265	253	252	243	226	218	216	216	213	205	200	118
Gross Totals	386	426	405	193	184	371	355	342	335	334	329	319	310	189

(X.)—*Scotch Banks. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Bank of Scotland	98	94	92	88	76	76	75	74	75	74	74	65	63	42
Royal Bank of Scotland	108	108	108	106	106	100	93	89	88	89	85	81	78	64
British Linen Co. Bank....	84	78	74	71	67	61	61	57	55	54	52	52	52	49
Coml. Bank of Scotland	105	105	102	100	100	96	94	91	89	86	86	85	82	65
National Bank	92	93	93	92	91	87	83	79	76	73	70	70	71	61
Aberdn. T'wn and Cy. Bk.	52	51	50	45	38	38	33	33	33	32	32	32	31	28
Union Bank of Scotland	118	118	118	118	116	116	112	108	108	105	107	108	107	99
No. of Scotland Bg. Co.	54	54	52	51	46	44	39	39	38	37	36	36	34	32
Clydesdale Banking Co.	85	83	82	82	79	76	75	74	74	71	70	69	67	49
Caledonian „	23	23	22	22	21	19	18	18	17	17	17	17	16	12
Ct. of Glg. Bk. fd. Oc. 1878	120	133	130	122	122	122	118	117	115	109	107	103	101	97
<i>Totals 11 jnt. stk. bks.</i>	939	940	923	897	862	835	801	779	768	747	736	718	702	598

(XI.)—*Irish Joint Stock Banks. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Bank of Ireland	57	56	48	48	49	43	42	40	38	38	38	35	34	26
Northern Banking Co.	36	36	35	35	35	34	34	39	36	32	32	28	24	12
Hibernian Bank	39	37	34	30	27	22	21	21	18	15	12	6	6	3
Provncl. Bank of Ireland	46	44	44	44	44	44	44	44	44	44	44	44	44	42
Belfast Banking Co.	37	36	35	35	35	35	32	31	32	31	31	31	30	23
National Bank	89	89	88	84	83	83	81	115	95	62	62	60	60	48
Ulster Banking Co.	52	55	48	46	43	40	35	34	32	30	29	29	28	18
Royal Bank of Ireland ...	5	4	4	4	4	4	4	4	4	4	3	2	2	....
Munster Bank, Limited	42	41	40	38	34	34	34	33	30	22	22	17	15	....
<i>Total 9 jnt. stk. bks.....</i>	403	398	376	364	354	339	327	361	329	277	272	252	243	172

(XIA.)—*Irish Private Banks. (Branches.)*

Banks.	'78.	'77.	'76.	'75.	'74.	'73.	'72.	'71.	'70.	'69.	'68.	'67.	'66.	'58.
Ball and Co., Dublin.....
Boyle, Low, and Co., ditto
Guinness & Co., „
Gray, Robert C.....
Kennedy and Co.
La Touche & Co.
<i>Total 6 private banks</i>

V.—*With what Margin of Uncalled Capital may the Leading Unlimited Banks safely become Limited?*

THE following letter on this important subject appeared in the *Statist* of 1st November, 1879:—

“SIR,—There seems to be considerable hesitation on the part of the unlimited banks, especially those in London, to avail themselves of the provisions of Sir Stafford Northcote’s Companies’ Act of last session. No doubt great deliberation is requisite before an unlimited bank elects to become limited. In one respect the advantage of the change to the shareholders is manifest. It defines the maximum sum which each shareholder can by any possibility lose, be the management of the bank as reckless or as fraudulent as it may. It is thus calculated to arrest the sale of shares by wealthy shareholders, and to prevent further depreciation in the market value of banking capital. It gives, moreover, to shareholders and creditors such security as may be afforded by a compulsory independent audit. These are great and most desirable advantages; but they would be dearly bought if the change to limited liability should entail any appreciable loss of credit and business. For an unlimited bank with any business to lose to transform itself into a limited bank with little or no uncalled margin upon its shares, would doubtless be an act of signal folly; but it must surely be possible to fix the margin of uncalled capital at such a point as to combine the most ample security to creditors with the definite limitation of liability which is desired by shareholders.

“The following figures show the proportion of the total bills, advances, and other business risks which in five notable cases were found on the failure of the respective banks to have been lost:—

[000's omitted.]

	Total Bills, Advances and other Business Risks.	Loss Ascertained or Estimated.	Rates of Loss to Business Risks.
	£	£	Per cent.
Liverpool Borough Bank	5,829,	1,061,	18
Royal Bank of Liverpool.....	4,244,	1,079,	25
City of Glasgow	11,000,	6,783,	62
Western Bank of Scotland	10,000,	2,816,	28
West of England	4,380,	1,242,	28
Totals	35,453,	12,981,	37

"It appears from these figures that, setting aside the unprecedented case of the City of Glasgow Bank, the losses have not, in the case of any of the other four failures, exceeded 28 per cent. of the business risks. It may be desirable to collect similar data regarding other failed banks so as to deduce an average from a wider range of instances; but it may with safety be assumed that short of the most persistent and happily most exceptional fraud on the part of directors and managers, the losses in the case of a failed bank will not exceed one-third of the total business risks.

"Let us endeavour to apply this assumption to the case of the leading metropolitan and metropolitan and provincial unlimited banks with the view of calculating what uncalled capital it would be necessary for them to maintain after their conversion into limited banks in order to protect their creditors from loss in the event of liquidation under adverse circumstances.

"In attempting this calculation, it must be remembered that many shareholders would, when brought to the test, prove unable to pay their calls in full, and that therefore only a portion of the nominal margin of uncalled capital could actually be realised under a liquidation. The collation of the statistics of bank liquidations upon this point would be of much interest. Meanwhile, in Mr. Robert Somers's 'Scotch Banks and System of Issue' (Edinburgh: Black, 1873), we have it on record that out of 27,281 shares in the hands of the public at the failure of the Western Bank, the calls of 125*l.* per share, or 2½ times the amount of the share, were paid in full on 13,169 shares. On the total 30,000 shares, calls of 125*l.* per share would have amounted to 3,750,000*l.* They actually realised 2,049,881*l.*, or 55 per cent. of the nominal total amount.

"In the case of the Royal Bank of Liverpool there were 50,000 shares of 10*l.*, and 1,500 shares of 100*l.*; the calls were 15*l.* per share on the 10*l.* shares, and 150*l.* per share on the 100*l.* shares, and on the entire number of shares they would have amounted to 975,000*l.* Notwithstanding that 1,280 shares of 10*l.* and 264 shares of 100*l.* were in the hands of the bank at the date of the failure, the calls actually realised 649,174*l.*, or 66 per cent. of the total which they would have reached had all the shares been available for calls, and all the calls been paid in full.

“In the cases cited the calls were respectively $2\frac{1}{2}$ times and $1\frac{1}{2}$ times the amount paid up per share, and as the results would not be too satisfactory if the calls were four, five, or more times the amount paid up, it may be as well to assume, in the present calculation, a much smaller proportion than the above instances show. To assume one-third of the uncalled capital as realisable under liquidation will surely be admitted to be a perfectly safe estimate, especially when it is considered that limitation of liability will probably ensure the retention of a better class of shareholders than would be retained under unlimited liability.

“At the date of their last published accounts, the figures of the great banks with which it is proposed now to deal were as under :—

TABLE I.—*Liabilities and Assets of Five Leading Metropolitan and Metropolitan and Provincial Unlimited Joint-Stock Banks.*

[000's omitted.]

	London and West- minster.	London Joint- Stock.	London and County.	Union Bank.	National Pro- vincial.
Liabilities—	£	£	£	£	£
Money lodged	22,967,	11,221,	21,657,	13,557,	26,504,
Acceptances	751,	2,926,	3,430,	3,562,	840,
	23,718,	14,147,	25,087,	17,119,	27,344,
Capital paid up	2,000,	1,200,	1,500,	1,395,	1,687,
Reserve fund....	1,008,	601,	750,	446,	930,
	26,726,	15,948,	27,337,	18,960,	29,961,
Assets—					
Bills, loans, &c.	14,057,	—	18,165,	12,097,	17,904,
Money at call and short notice..... }	2,622,	—	2,276,	1,474,	—
Together	16,679,	13,045,	20,441,	13,571,	—
Cash and Government and first-class securities	10,047,	2,847,	6,580,	5,055,	11,663,
	26,726,	15,892,	27,021,	8,626,	29,567,

“Subjoined is a calculation of the margin of uncalled capital which these banks would respectively require to provide in order that in each case one-third of such uncalled capital might, with the existing paid up capital and reserve fund, cover a hypothetical loss of one-third of the advances, bills, and other business risks, and thus leave to the creditors a practical certainty of receiving payment in full.

TABLE II.—*Attempted Calculation of the Uncalled Margin of Capital which ought to be maintained by the Five Leading Unlimited Banks, if they became Limited Banks.*

	London and West- minster.	London Joint Stock.	London and County.	Union Bank.	National Provincial.
	£	£	£	£	£
Total business risk in- cluding money at call and short notice	16,679,	13,045,	20,441,	13,571,	17,904,*
One-third of total busi- ness risk	5,560,	4,350,	6,814,	4,523,	6,000,
Deduct paid up capital and reserve fund	3,000,	1,800,	2,250,	1,841,	3,236,†
Difference	2,560,	2,550,	4,564,	2,682,	2,764,
Share	£ 100	50	50	50	50 20
Paid up	20	15	20	15½	21 12
Uncalled	80	35	30	29½	29 8
Number of shares No.	100,000	80,000	75,000	90,000,	20,000 133 750
Total now uncalled ..	8,000,	2,800,	2,250,	2,615,	1,650,
Suggested additional reserve liability per share	£ —	60	160	60	100 40
Making total uncalled ..	—	7,700,	14,250,	8,055,	9,000,
One-third estimated realisable on liqui- dation	2,666,	2,566,	4,750,	2,685,	3,000,

* This sum does not include money at call and short notice.

† In the case of the National Provincial, the capital and reserve fund are taken as they will stand after payment of calls on shares recently issued at a premium.

“The London and Westminster will be seen to be the only one of these five banks which, as a limited bank, would come up to the assumed standard without adding further reserve liability to the present amount of its share. In re-registering as a limited bank, its share might be divided thus:—Paid up, 20*l.*; callable for the purpose of carrying on the business, 20*l.*; reserved, to be called only for liquidation, 60*l.*; total, 100*l.*

“The proprietors’ funds, that is the capital and reserve fund, of the London and County, have, by reason of the satisfactory increase of the bank’s business, become too small for the amount of its liabilities, to which they bear the proportion of only one-eleventh. If this bank followed the example of the National Provincial, and issued new shares at a premium, thereby adding considerably both to capital and reserve fund, the sum which it would require to tack

to each share as reserve liability on becoming limited would be correspondingly diminished.

"It will probably be asked: 'If the City of Glasgow Bank lost nearly 7 million pounds in, say ten years, without the knowledge of its shareholders or the public, what guarantee is there that the great London banks might not lose the smaller sums which have been estimated as in each case necessary to be lost before their creditors could suffer?' The answer is threefold:—

"1. The recurrence of such an unparalleled case of mismanagement and fraud as that of the City of Glasgow Bank, is a contingency which may certainly be regarded as in the highest degree improbable. Limited liability will not make prudent and honest directors rash and fraudulent.

"2. Unlimited banks becoming limited are subjected under the Act to an independent audit, and there was no audit in the case of the City of Glasgow Bank.

"3. The existence of the City of Glasgow Bank was protracted, long after its management was suspected to be bad, by the circumstance that the liability of its shareholders was unlimited. Had it been a limited bank its fraudulent career would certainly have been arrested much sooner by the discredit of its acceptances in the London discount market.

"Upon the whole, although there will necessarily be differences of opinion as to the accuracy of the test which has been applied in these remarks, yet it will generally be admitted that with some such broad margins of liability as have been indicated, the great banks referred to may with advantage register themselves as limited companies without fear of impairing their deservedly undoubted credit.

"The sooner they agree to take that step the better for themselves and the better for the interests of joint-stock banking all over the country, for there can be little doubt that there exists a great indisposition to purchase or to hold shares involving an undefined liability, and that the consequent depreciation of unlimited bank shares has to some extent caused a sympathetic depreciation of those of limited banks.—I am, SIR, yours obediently,

"JOHN DUN."

VI.—*The Influence of the Price of Goods on the Movements of the Foreign Trade of France.**

WE translate the following articles, which have appeared in the *Economiste Français*, from the pen of M. de Foville, of the French Ministry of Finance:—

"All our readers do not perhaps know how the values of the annual imports and exports of France, as given in the official sta-

* *De l'influence du prix des Marchandises sur les mouvements de notre commerce extérieur.*

tistics, are calculated. With regard to certain articles it falls on the importer or exporter himself to declare the value of his goods; but in most cases the customs' agents confine themselves to registering the quantity imported or exported (number, weight, or volume), and to arrive at the corresponding value of these quantities, the central office fixes for each kind of goods a mean rate of value.

"A first tariff was decided on according to this method, after due consideration, in 1827, and for twenty years these official values, as they were called, have been employed without intermission or modification. Afterwards, as they drifted more and more into fallacy, it was decided, for 1847, to regenerate this old tariff. The institution of the permanent commission of customs values dates from this time. This commission, which comprises the highest authorities of the different branches of commerce, meets in the spring of each year, and revises, after careful consideration, the list of real values (*valeurs actuelles*) applied to the imports and exports of the year past. One has only to multiply the quantities registered by these different prices, and to sum up the amounts obtained.

"The result being that in the summary tables published by the Custom House, the variations which the totals of our imports and exports present from year to year are, up to 1847, due merely to variations in quantity; whilst since 1847 they show variations both in quantity and in price.

"When the value of exchange between different countries is found to rise or fall, it is evidently a matter of interest to ascertain in what degree the movement of prices may have contributed to this rise or fall.

"In a remarkable report* presented last winter to the English Government by Mr. Robert Giffen, Director of Statistics at the Board of Trade, the question is treated in its relation to English exports. For that country all values registered are declared values; but on investigating the mean price resulting from the declarations, and by applying the admirable method of *coefficients proportionnels* formulated by us, and which we have employed since 1872 in our *Mémoire sur les Variations des Prix*, Mr. Giffen shows, amongst other striking facts, that the seeming decrease of English exports from 1873 to 1877 is perfectly explained by the lowering of prices, the result being that, contrary to a universally accepted belief, the volume of these exports has in no way decreased. England does not sell less goods than in 1873; she merely sells them at a lower price.

"The method on which the tables of English commerce are based, we would remark, renders comparisons of this nature by no means easy, and Mr. Giffen has been obliged to confine his researches to a limited period of years, chosen from amongst the most interesting, as the subject of investigation.

"The peculiar arrangement of French statistics enables the same problem to be solved with less trouble and also with more accuracy. We intend to show, moreover, from year to year, for a

* This report will be found *in extenso* at pp. 305 *et seq.* of the *Statistical Journal*, vol. xlii, part 1, March, 1879.—(Translator.)

period of thirty years, what has been the part played by the variation in prices in the successive fluctuations in the foreign commerce of France. Since, however, we believe that the methods of calculation which give us these valuable results have not been employed up to the present time, we have thought it necessary, at the risk of some slight abuse of the figures, to go to work as if we were, so to speak, in our reader's presence.

"We will distinguish—our reason for which will appear further on—two periods, that of 1847-62 and that of 1862-77.

"From 1847 to 1862, the Custom House, in its annual tables, published, side by side, the official values (*valeurs officielles*) and the real values (*valeurs actuelles*) of goods imported or exported; that is to say, they multiplied in turn the quantities imported or exported by the prices of 1827, then by the new prices determined each year by the permanent commission. The following is a *résumé* for each of the sixteen years of this double valuation:—

TABLE A.—*Special Trade** (*Commerce Spécial*).

Years.	Imports.		Exports.	
	Official Values.	Real Values.	Official Values.	Real Values.
	Mlrs.	Mlrs.	Mlrs.	Mlrs.
1847	976	956	891	720
'48	557	474	834	690
'49	780	724	1,032	938
'50	781	791	1,124	1,068
'51	781	765	1,238	1,158
'52	986	989	1,233	1,257
'53	1,103	1,196	1,363	1,542
'54	1,158	1,292	1,261	1,414
'55	1,366	1,594	1,442	1,558
'56	1,521	1,990	1,627	1,893
'57	1,450	1,873	1,640	1,866
'58	1,384	1,563	1,777	1,887
'59	1,404	1,641	1,998	2,266
'60	1,586	1,897	2,091	2,277
'61	2,018	2,442	1,874	1,926
'62	1,789	2,199	2,152	2,243

"The discrepancy between the official values and the real values in each line of this table shows by how much the general level of prices in 1848-50, &c., differed more or less from the general level of prices in 1827. Take, for instance, the imports of 1847. According to the official values of 1827 they amounted to 976 millions, and to 956 millions only according to the actual prices of 1847. From this we conclude that with regard to imports the prices of 1847, taken as a whole, were 2 per cent. lower than those

* The calculations which are contained in the various Tables A, B, C, D, and E have been made with a particular number of decimals, which we have not thought fit to make public here. This will explain the larger discrepancies which the reader may discover in making the calculations for himself with the round numbers which we have placed before him.

of 1827. With regard to exports, the same estimate gives from 1827 to 1847 a decrease of 19 per cent. Proceeding in this way, and taking 100 as the mean level of prices in 1827, which does duty as a *datum* line, the above table gives us the following results:—

TABLE B.—*Variations per Annum of the General Level of Prices from 1847 to 1862, the Mean of 1827 being taken as 100.*

Years.	Imports.		Exports.	
	Proportional Variations Compared with 1827.	Actual Movement Compared with 1827.	Proportional Variations Compared with 1827.	Actual Movement Compared with 1827.
	Per cent.		Per cent.	
1827	—	100	—	100
'47	— 2	98	— 19	81
'48	— 15	85	— 17	83
'49	— 7	93	— 9	91
'50	+ 1	101	— 5	95
'51	— 2	98	— 6	94
'52	—	100	+ 2	102
'53	+ 8	108	+ 13	113
'54	+ 12	112	+ 12	112
'55	+ 17	117	+ 8	108
'56	+ 31	131	+ 16	116
'57	+ 29	129	+ 14	114
'58	+ 13	113	+ 6	106
'59	+ 17	117	+ 13	113
'60	+ 20	120	+ 9	109
'61	+ 21	121	+ 3	103
'62	+ 23	123	+ 4	104

“Let us forbear for the present to analyse these successive variations, and pass to the second period, viz. that which begins with 1862.

“Here the datum line which has hitherto served our purpose, fails us. In fact the Custom House authorities, after the grand reformation of 1860, rejected the double calculations which they had burdened themselves with up to that time. Real values only are to be found in their publications after 1862, and to repair this hiatus by calculating the official values for ourselves, would necessitate an amount of leisure and patience which we can lay no claim to.

“However, by a fortunate coincidence, there happens to appear at this period, under the title of *Documents Statistiques*, certain tables (not altogether complete), which enable us to follow, not only year by year, but further, month by month, the development of our foreign commerce; and we shall find in them a new means of comparison equal to and indeed better than that which is taken from us.

“That one of these monthly numbers which appears each year about the 20th January, includes the whole of the imports and exports for the twelve months of the preceding year; only, as in January, 1878, for instance, the permanent commission of customs values has not as yet determined the mean prices of 1877; it is by

means of those of 1876 determined in 1877 that the valuations of this provisional table are obtained. And when, some months after, the permanent commission has decided on the new tariff, the multiplications must be resumed, substituting for the prices of 1876 employed in the first instance, the true prices of 1877.

“When therefore we compare the final table of 1877 with the provisional one, we find both in imports and exports two different totals, and the difference of these two totals exactly measures the influence exercised by the substitution of the prices of 1877 for those of 1876. It is enough therefore in order to determine the amount per cent. of the difference ascertained to know by how much the mean of the prices of 1876 has differed from that of 1877. Thus when we see that the imports of 1877, valued at 3,756 million francs by the prices of 1876, recede to 3,670 millions by the prices of 1877, we conclude perfectly naturally that the prices with regard to the whole articles imported, have undergone from 1876 to 1877 a reduction of 2 to 2·5 per cent.

“Let us compare the provisional valuations with the final valuations from 1863 to 1878 as they are shown in the following table:—

TABLE C.—*Special Trade.*

Years.	Imports.		Exports.	
	Provisional Valuations.	Final Valuations.	Provisional Valuations.	Final Valuations.
	Mins.	Mins.	Mins.	Mins.
1863	2,367	2,426	2,622	2,642
'64	2,480	2,528	2,909	2,924
'65	2,782	2,642	3,199	3,088
'66	2,960	2,793	3,390	3,180
'67	3,156	3,026	2,972	2,826
'68	3,398	3,304	2,907	2,790
'69	3,174	3,153	3,097	3,075
'70	2,781	2,867	2,860	2,802
'71	3,393	3,567	2,865	2,873
'72	3,447	3,570	3,679	3,762
'73	3,600	3,555	3,927	3,787
'74	3,748	3,508	3,878	3,701
'75	3,672	3,537	4,022	3,873
'76	3,950	3,988	3,570	3,576
'77	3,756	3,670	3,484	3,436
'78	4,461	4,176	3,370	3,180

“Below we have, according to the foregoing figures, and by representing this time the mean level of 1862 by 100, the annual movement of prices, both as regards the imports and exports, for seventeen years:—

TABLE D.—*Annual Variations in the General Level of Prices from 1862 to 1877, the Mean of 1862 being taken as 100.*

Years.	Imports.		Exports.	
	Proportional Variation Compared with the Preceding Year.	Actual Movement Compared with 1862.	Proportional Variation Compared with the Preceding Year.	Actual Movement Compared with 1862.
1862	—	100	—	100
'63	+ 2·5	102·5	+ 0·8	100·8
'64	+ 1·9	104·5	+ 0·5	101·3
'65	— 5·0	99·2	— 3·5	97·8
'66	— 5·6	93·5	— 6·2	91·5
'67	— 4·1	89·7	— 4·9	87·0
'68	— 2·8	87·2	— 4·0	83·5
'69	— 0·7	86·6	— 0·7	82·9
'70	+ 3·1	89·3	— 2·0	81·2
'71	+ 5·1	93·9	+ 0·3	81·4
'72	+ 3·6	97·3	+ 2·2	83·3
'73	— 1·2	96·1	— 3·6	80·3
'74	— 6·4	89·9	— 4·5	76·6
'75	— 3·7	86·7	— 3·7	73·8
'76	+ 1·0	87·5	+ 0·2	73·9
'77	— 2·3	85·5	— 1·4	72·9
'78	— 6·4	80·0	— 5·6	68·8

“We could bring our calculations to an end here, since they now give us the complete series of variations of prices in the foreign commerce of France from 1827 up to 1878; but as we have been obliged to take two different terms of comparison, the prices of 1827 for the first period (Table B), and the prices of 1862 for the second (Table D), there exists between these two tables an evident continuity of solution comparable to those of two series of thermometrical observations which might have been taken—the first series with a centigrade, the others with a Fahrenheit thermometer. To aid the reader, and facilitate the simultaneous use of our two tables, we will reproduce Table B on the same scale as Table D, by substituting 1862 for 1827 as the term of comparison. It is a very elementary piece of arithmetic, and we content ourselves with recording the results:—

TABLE E.—*Annual Variations of the General Level of Prices from 1827 to 1877, the Mean of 1862 being taken as 100.*

Years.	Imports.	Exports.	Years.	Imports.	Exports.
1827	81	96	1863	102.5	100.8
'47	80	78 (min.)	'64	104.5 (max.)	101.3 (max.)
'48	69 (min.)	80	'65	99.2	97.8
'49	76	87.5	'66	93.5	91.5
'50	82	91	'67	89.7	87
'51	80	90	'68	87.2	83.5
'52	81	98	'69	86.6 (min.)	82.9
'53	88	109	'70	89.3	81.2 (min.)
'54	91	108	'71	93.9	81.4
'55	95	104	'72	97.3 (max.)	83.3 (max.)
'56	106.5 (max.)	111.5 (max.)	'73	96.1	80.3
'57	105	110	'74	89.9	76.6
'58	92 (min.)	102 (min.)	'75	86.7	73.8
'59	95	109	'76	87.5	73.9
'60	98	105	'77	85.5	72.9
'61	99	99	'78	80.0 (min.)	68.8 (min.)
'62	100	100			

"Here we find ourselves in a position to establish the double curve of variation of prices in the foreign trade of France. Between the two portions of this curve, that which precedes 1862 and that which follows this date, there is now, if not a general similarity, at least an evident continuity, and the comparisons of the different periods become as easy as they appeared difficult at first sight. It is to these comparisons, and the results they offer—results which are indeed curious, and perhaps not fully heeded—that we now pass. If we carefully examine Table E, and especially if we take the trouble to graphically translate the numerical facts, we shall be able to illustrate hereby three very distinct periods.

"The first period takes its origin in the economical and political crisis of 1847-48, and includes but a few years. It is marked by an upward movement of great rapidity. The level of prices passes—with regard to imports, from 69 in 1848 to 106.5 in 1856; and with regard to exports, from 78 in 1847 to 109 in 1853, and 111.5 in 1856. The increase in the precious metals, following on the discovery of the Californian mines (1848), and Australian mines (1851), has a great deal to do with this sudden rise in price; but it is also partly explained by the feverish activity which marks the new life infused into industry in France and elsewhere following on 1852.

"The second period, of nearly equal duration, is a period of 'inflation,' as the English say. Up to 1864 prices remain at an exceptionally high level, and the crash which, in 1857-58, further testifies to the all but decennial nature of commercial crises, only reduces them as regards imports to 92, and as regards exports to 102.

"The third period, which began about fifteen years ago, is a period of depression (*décroissance*) unchecked, save for a few years after the Franco-German War.

"Thus it is that, beginning with 100 in 1862, we find the level

of prices reduced in 1877 to 85 and 73, and in 1878 to 80 and 69; the decrease between 1877 and 1878 being not less than 6·4 per cent. for imports, and 5·6 per cent. for exports. Taking the whole of our foreign trade, imports and exports together, we may say that the reduction in price has never for thirty years been of such great extent as at present; and this, the first result of our investigations, the more invites our attention, that in the home trade of France (*commerce intérieur*) the actual prices are still sensibly higher than those of thirty years ago. In this flux and reflux of prices, whose existence we have shown, and whose intensity we have probed, the imports and exports as a rule are equally affected; the only exceptions to the rule being from 1853 to 1865, and from 1859 to 1861. But besides the influences to which these two groups of prices are equally subjected, there appears in the imported produce a decided tendency to an increase, and in the exported produce a decided tendency to a decrease. There is nothing extraordinary in this. Those of the readers of the *Economiste Français* who have been good enough to examine the numerous articles which we have directed in that paper to the immediate observation of the variations in prices, and also to the study of the principal causes of these fluctuations, know that the law which is most frequently evolved by this double analysis is this: increase, absolute or relative, of natural produce; decrease, absolute or relative, of manufactured produce. In other words, France, like every industrial country in Europe, buys more natural produce (necessities of life or raw material) than she sells, and sells, on the other hand, more manufactured articles than she buys. It is natural, then, that we should again have the tendency to a rise in price in the imports, which is the peculiarity of natural produce, and, on the other hand, the opposite tendency in exports, which is the peculiarity of manufactured produce.

“ This tendency of prices to diverge from imports to exports, of necessity enables the imports, little by little, to overhaul the exports in regard to value. In 1877, for instance, our special trade reads as follows:—Imports 3,670 million fcs., exports 3,436 million fcs.; or an excess of imports amounting to 234 millions; that is to say, 6 to 7 per cent. This is what the professors of the old commercial theory, who still muster strong, call an unfavourable balance, and put forward as a fatal sign, forgetting that this same year (1877), far from impoverishing our stock of money, has swelled it by more than half a milliard.

“ But our table shows us a difference of over 7 per cent. between the decrease in the prices of imports and the decrease in prices of exports since 1862; from which it is plain that if the prices had followed the same course in both cases, the balance of the year 1877 would yet have been in our favour; and this clearly proves that, in order to view the question aright, it is of the utmost importance that we detach the annual movement of our foreign trade from the influence of the variations in price as shown in the official statistics.

“ This we now propose to do; at least as far as the exports are concerned. For this, it is enough for each year, except 1862, to add to or subtract from the total values of exports in the proportion shown in the different columns of Table E. For instance, the

prices of the exports of 1848 are to those of 1862 as 80 is to 100. The inferiority of the export values in 1848 compared with those of 1862 agrees then to within one-fifth with the change of prices. In order to eliminate this particular influence, we have only to increase the figure for 1848 in the proportion of 80 to 100, which gives us 862 millions in the place of 690 millions. Take another instance. The prices of 1857 are to those of 1862 as 110 is to 100. If we lower the figure for export values in 1857 in the proportion of 110 to 100, we get 1,696 millions in the place of 1,866 millions, and so on for the other years; in this way we substitute for what we have called the curve of values, that which may be called the curve of quantities exported.

TABLE F.—*Exports.*

Years.	Variation of Values.	Level of Prices.	Variation of Quantities.
	Mlns.		Mlns.
1847	720	78·0	923
'48	690	80·0	862
'49	938	87·5	1,072
'50	1,068	91·0	1,174
'51	1,158	90·0	1,287
'52	1,257	98·0	1,283
'53	1,542	109·0	1,415
'54	1,414	108·0	1,309
'55	1,558	104·0	1,498
'56	1,893	111·5	1,698
'57	1,866	110·0	1,696
'58	1,887	102·0	1,850
'59	2,266	109·0	2,079
'60	2,277	105·0	2,169
'61	1,926	99·0	1,946
'62	2,243	100·0	2,243
'63	2,643	100·8	2,622
'64	2,924	101·3	2,886
'65	3,088	97·8	3,157
'66	3,180	91·5	3,476
'67	2,826	87·0	3,248
'68	2,790	83·5	3,341
'69	3,075	82·9	3,709
'70	2,802	81·2	3,451
'71	2,873	81·4	3,529
'72	3,762	83·3	4,516
'73	3,787	80·3	4,716
'74	3,701	76·6	4,831
'75	3,873	73·8	5,248
'76	3,576	73·9	4,839
'77	3,436	72·9	4,713
'78	3,180	68·8	4,622

“As may be seen, this substitution of quantities for values perceptibly reduces the contingents of the years 1853 to 1860 whilst it greatly adds to those of the twelve latter years. For 1878 the addition is more than 40 per cent. In this way is the specious reasoning of the advocates of protection, which consists of the statement that the development of French exports has been slower since the treaty of commerce of 1860 than during the ten previous

years, reduced to *nil*. The official figures seem to give ground for this statement, since from 1,158 millions in 1851, we see the export values rise to 2,277 millions in 1860, or an average increase of 124 millions per annum; whilst between 1861 and 1878 these values rose from 1,926 millions to 3,180 millions only, or an annual increase of 75 millions at the most.

"To this we would reply, that our old customs tariff had already, from 1853 to 1856, been freely modified, and that the rapid advance of international trade at this period is to be explained both by these first reforms and by the simultaneous change for the better in the means of production and of transport. Meanwhile, we have as yet only lessened the weight of a troublesome objection. At present we see only what is this movement of prices, which thus gives the deceptive appearance to the commercial period prior to 1860 of greater prosperity than that of the treaty of commerce. Comparing the quantities and not the values, the average increase does not amount to more than 98 millions per annum from 1851-60, against 157 millions from 1861-78 (in spite of the crisis which has occurred); and thus we see the actual worth of our exchanges with foreigners to be proportionate according to logical laws, and contrary to protectionist pretensions, to the reduction of fiscal obstructions.

"Such is the influence of the variation of prices on the figures for export values, that if we place the two years 1873 and 1877 side by side, which we frequently see quoted—the one as a year of extraordinary activity, the other as a year of great depression—we notice, precisely as shown by Table F, that France has exported just as much goods in 1877 as in 1873, and that the decrease in export values arises entirely from the reduction of prices. We can say almost the same for 1878. This was likewise Mr. Giffen's conclusion as regards England. There, as with us, the quantity of the exports was the same in 1877 as it was in 1873. The prices alone had lowered. For instance, the decrease in this interval of four years was still more marked in England than in France. In round numbers, the general level of prices had decreased by 25 per cent. as regards English exports; nothing from 1873-77, and from 1873-78 it had decreased only by 14 per cent. in our own exports.

"This difference, which is in favour of those who have always held that the actual crisis was less severe in France than in England, is best explained by the different composition of the two exports; we export one half natural products, the other half manufactures. In England, it is industry which almost solely contributes to the exports. In other respects, the prices are far, as regards like articles, from showing identical variations on both sides of the straits. There remains to be ascertained what, in the principal industries, are the elements of the selling price which have given way. If the cost price had been reduced as much as the selling price, industry could not but have profited by the reduction, since it would not have involved the reduction of profits, and would have allowed of the reduction of the capital employed. But it is all but certain that this gradual lowering of the selling price which we have ascertained has consumed a goodly portion of commercial profits.

"A. DE FOVILLE."

VII.—*Statistics of Australasian Colonies.*

WE have received the following from the Registrar-General of New South Wales:—

AUSTRALASIAN COLONIES.—*Statistical Return showing the Relative Positions and*

	Name of Colony.			
	New South Wales.	Victoria.	South Australia.	Queensland.
Estimated mean population of 1878	677,979	869,040	243,253	206,797
Revenue of 1878	4,983,864 <i>l.</i>	4,504,413 <i>l.</i> ¹	1,592,635 <i>l.</i>	1,559,111 <i>l.</i>
Proportion of revenue of 1878, raised by taxation	1,309,717 <i>l.</i>	1,712,953 <i>l.</i> ²	519,254 <i>l.</i>	694,062 <i>l.</i>
Rate of taxation per head of population	1 <i>l.</i> 18 <i>s.</i> 7½ <i>d.</i>	1 <i>l.</i> 19 <i>s.</i> 10½ <i>d.</i> ³	2 <i>l.</i> 2 <i>s.</i> 8¼ <i>d.</i>	3 <i>l.</i> 7 <i>s.</i> 1½ <i>d.</i>
Value of imports for 1878	14,768,873 <i>l.</i>	16,161,880 <i>l.</i>	5,719,611 <i>l.</i>	3,436,077 <i>l.</i>
Value of imports per head of the population	21 <i>l.</i> 15 <i>s.</i> 8 <i>d.</i>	18 <i>l.</i> 11 <i>s.</i> 11¼ <i>d.</i>	23 <i>l.</i> 10 <i>s.</i> 3 <i>d.</i>	16 <i>l.</i> 12 <i>s.</i> 3¾ <i>d.</i>
Value of exports for 1878	12,965,879 <i>l.</i>	14,925,707 <i>l.</i>	5,355,021 <i>l.</i>	3,190,419 <i>l.</i>
Value of exports per head of the population	19 <i>l.</i> 2 <i>s.</i> 5¾ <i>d.</i>	17 <i>l.</i> 3 <i>s.</i> 6 <i>d.</i>	22 <i>l.</i> — <i>s.</i> 3¼ <i>d.</i>	15 <i>l.</i> 8 <i>s.</i> 6½ <i>d.</i>
Total value of trade, imports and exports	27,734,752 <i>l.</i>	31,087,587 <i>l.</i>	11,074,632 <i>l.</i>	6,626,496 <i>l.</i>
Value of trade per head of the population	40 <i>l.</i> 18 <i>s.</i> 1¾ <i>d.</i>	35 <i>l.</i> 16 <i>s.</i> 5¼ <i>d.</i>	45 <i>l.</i> 10 <i>s.</i> 6¼ <i>d.</i>	32 <i>l.</i> — <i>s.</i> 10¼ <i>d.</i>
Miles of railway open, 31st December, 1878.....	733½ ⁴	1,052	454½	428
Miles of railway in course of construction, 31 Dec., 1878	207¾	72	358	380
Miles of telegraph lines open, 31st December, 1878	7,078	2,970½	4,217	5,410
Miles of telegraph wire open, 31st December, 1878.....	11,760½	5,403¾	5,686	7,125
Miles of telegraph in course of construction, 31st Dec., 1878				
Length of lines (miles).....	149	44½	675¾	322
„ wire („).....	149	44½	756¼	667
Number of acres under crop in 1878	613,642	1,609,278	2,011,319	111,746
Number of horses in 1878	336,468	210,105	121,553	147,076 ⁵
„ cattle „	2,771,583	1,184,843	251,802	2,433,567 ⁵
„ sheep „	23,967,053	9,379,276	6,377,812	5,564,465 ⁵
„ pigs „	220,320	177,373	103,422	50,301 ⁵
Estimated population on 31st December, 1878.....	693,743	879,442	248,795	210,510
Public debt on 31st Dec., 1878	11,688,119 <i>l.</i>	17,022,065 <i>l.</i>	5,329,600 <i>l.</i>	8,935,350 <i>l.</i>
Rate of indebtedness per head of population.....	16 <i>l.</i> 16 <i>s.</i> 11¼ <i>d.</i>	19 <i>l.</i> 7 <i>s.</i> 1¼ <i>d.</i>	21 <i>l.</i> 8 <i>s.</i> 5 <i>d.</i>	42 <i>l.</i> 8 <i>s.</i> 11 <i>d.</i>

¹ For the year ended 30th June, 1878.

² The taxation levied by the general Government was less in 1877-78 than in the former year, transferred to the Melbourne Harbour Trust.

³ This has been calculated according to the mean population of the financial year ended

⁴ Includes a private line of railway, 45 miles in length.

⁵ There are five districts for which the returns are deficient—Blackall, Bowen, Bourke,

⁶ Not including 133 miles of telegraph line belonging to the Tasmanian main line

⁷ On 30th June, 1879.

⁸ Includes 1,236,100 acres in grass after having been broken up, including such as in hay; but hay, and 263,353 acres broken up but not under crop.

Aggregate Importance of the Australasian Colonies, at the close of the Year 1878.

Name of Colony.					
Tasmania.	Western Australia.	Total.	New Zealand.	Total for Australasian Colonies.	
108,525	28,002	2,133,596	423,465	2,557,061	Estimated mean population of 1878
386,060 <i>l.</i>	163,344 <i>l.</i>	13,189,427 <i>l.</i>	4,167,889 <i>l.</i>	17,357,316 <i>l.</i>	Revenue of 1878
247,583 <i>l.</i>	75,850 <i>l.</i>	4,559,419 <i>l.</i>	1,533,393 <i>l.</i>	6,092,812 <i>l.</i>	Proportion of revenue of 1878, raised by taxation
2 <i>l.</i> 5 <i>s.</i> 7½ <i>d.</i>	2 <i>l.</i> 14 <i>s.</i> 2 <i>d.</i>	2 <i>l.</i> 2 <i>s.</i> 11¼ <i>d.</i>	3 <i>l.</i> 12 <i>s.</i> 5 <i>d.</i>	2 <i>l.</i> 7 <i>s.</i> 10 <i>d.</i>	Rate of taxation per head of population
1,324,812 <i>l.</i>	379,050 <i>l.</i>	41,790,303 <i>l.</i>	8,755,663 <i>l.</i>	50,545,966 <i>l.</i>	Value of imports for 1878
12 <i>l.</i> 4 <i>s.</i> 2 <i>d.</i>	13 <i>l.</i> 10 <i>s.</i> 8¾ <i>d.</i>	19 <i>l.</i> 11 <i>s.</i> 8¾ <i>d.</i>	20 <i>l.</i> 13 <i>s.</i> 6¼ <i>d.</i>	19 <i>l.</i> 15 <i>s.</i> 4 <i>d.</i>	Value of imports per head of the population
1,315,695 <i>l.</i>	428,491 <i>l.</i>	38,181,212 <i>l.</i>	6,015,525 <i>l.</i>	44,196,737 <i>l.</i>	Value of exports for 1878
12 <i>l.</i> 2 <i>s.</i> 5½ <i>d.</i>	15 <i>l.</i> 6 <i>s.</i> -½ <i>d.</i>	17 <i>l.</i> 17 <i>s.</i> 10¾ <i>d.</i>	14 <i>l.</i> 4 <i>s.</i> 1¼ <i>d.</i>	17 <i>l.</i> 5 <i>s.</i> 8 <i>d.</i>	Value of exports per head of the population
2,640,507 <i>l.</i>	807,541 <i>l.</i>	79,971,515 <i>l.</i>	14,771,188 <i>l.</i>	94,742,703 <i>l.</i>	Total value of trade, imports and exports
24 <i>l.</i> 6 <i>s.</i> 7½ <i>d.</i>	28 <i>l.</i> 16 <i>s.</i> 9¼ <i>d.</i>	37 <i>l.</i> 9 <i>s.</i> 7½ <i>d.</i>	34 <i>l.</i> 17 <i>s.</i> 7½ <i>d.</i>	37 <i>l.</i> 1 <i>s.</i> - <i>d.</i>	Value of trade per head of the population
172½	48	2,888¼	1,0897	3,977¼	Miles of railway open, 31st December, 1878
—	—	1,017¾	1427	1,159¾	Miles of railway in course of construction, 31 Dec., 1878
692 ⁶	1,568¾	21,936¼	3,434	25,370¼	Miles of telegraph lines open, 31st Dec., 1878
910 ⁶	1,580¾	32,466	8,035	40,501	Miles of telegraph wire open, 31st December, 1878
38	—	1,229¼	—	1,229¼	Miles of telegraph in course of construction, 31st Dec., 1878
38	—	1,654¾	—	1,654¾	Length of lines (miles)
143,797	51,065	4,540,847	2,053,910 ⁸	6,594,757	" wire (")
24,107	32,801	872,110	137,768	1,009,878	Number of acres under crop in 1878
126,276	56,158	6,824,229	578,430	7,402,659	Number of horses in 1878
1,838,831	869,325	47,996,762	13,069,338	61,066,100	" cattle "
39,595	16,762	607,773	207,337	815,110	" sheep "
109,947	28,166	2,170,603	432,519	2,603,122	" pigs "
1,738,500 <i>l.</i>	184,566 <i>l.</i>	44,898,200 <i>l.</i>	22,608,311 <i>l.</i> ⁹	67,506,511 <i>l.</i>	Estimated population on 31st December, 1878
15 <i>l.</i> 16 <i>s.</i> 2¾ <i>d.</i>	6 <i>l.</i> 11 <i>s.</i> -½ <i>d.</i>	20 <i>l.</i> 13 <i>s.</i> 8¼ <i>d.</i>	52 <i>l.</i> 5 <i>s.</i> 5 <i>d.</i>	25 <i>l.</i> 18 <i>s.</i> 7¾ <i>d.</i>	Public debt on 31 Dec., 1878
					Rate of indebtedness per head of population

in consequence of four-fifths of the wharfage rates, amounting in 1877-78 to 85,249*l.*, having been 30th June, 1878 (859,235).

Cunnamulla, and Marathon; the whole number of stations not included being fifty-five. railway.

exclusive of 1,501,651 acres of grass-sown lands not previously ploughed, including such as in Accrued sinking fund, 1,678,127*l.* Net debt, 20,930,184*l.*

VIII.—Notes on some of the Additions to the Library.

Die Reichsraths-Wahlen vom Jahre 1879 in Oesterreich. Auf Grund der amtlichen Daten Statistisch-vergleichend dargestellt, von Dr. F. X. v. Neumann-Spallart und G. A. Schimmer. Mit vier Karten im Farbendruck. Stuttgart. Verlag von Julius Maier. 1880.

The statistical investigation of elections is not, as it is usually carried on, a profitable exercise of ingenuity. The volume recently prepared by Dr. Neumann and Herr Schimmer is an exception to this rule. The questions which these two able statisticians had before them were not political, though it is not impossible that some of their answers to them may be a ground for political action eventually. The work is of course mainly concerned with Austria; but the authors have wisely thought fit to illustrate their inquiries by reference to the state of foreign nations in the more important particulars connected with the political elections. The introduction contains some general remarks on the political importance of elections, in which the representative institutions of other countries besides Austria are touched on, but this is done solely with a view to showing the necessity for a systematic examination of the facts, which is as essential to the politician as to the sociologist, since the working of institutions must be thoroughly understood before reforms in them are proposed. Accordingly the authors of this treatise have undertaken to construct the "comparative statistics of political elections on the basis of the official returns." The special election whose phenomena are considered was that for the Austrian Reichsrath in 1879, but the general character of such elections is investigated, and the various points of interest are illustrated by comparison with other countries. The Austrian suffrage is based on property, and the number of representatives does not change with the increase in the population. Austria has, compared with other states, few representatives, there being only one to every 62,239 inhabitants. It is pointed out, however, that this somewhat meagre representation is supplemented by the delegates who sit in the Landtagen of the various provinces, as well as by the town council of Trieste. This, we may observe, cuts both ways, for the other countries also have municipal or communal institutions. The authors further state, that though the list of persons qualified to vote was smaller in 1879 than in 1873, the year of the previous election, the number of persons who exercised their privilege was actually greater in 1879 than in 1873, and they remark that so long as only about 67 per cent. of those who are qualified to vote, make use of their right, there is no need to enlarge the suffrage. It seems that the economic crisis that occurred in Vienna in 1873, the "Vienna Krach," has left its mark on the registers in the shape of a diminished number of voters. It has been already remarked that though the electors were fewer in number, those who voted were more numerous in 1879 than in 1873. The improvement is chiefly due to the greater interest taken in the elections by those who had a direct share in electing representatives to the Reichsrath. Of these, from 54 to 80 per cent. took part in the election; while of those who take part indirectly, only 32 per cent. took the trouble to come to the poll. The authors abstain from any comment on this

fact, but consider it worth attention. They remark that no statistical information can be given regarding the political composition of the Reichsrath, or indeed any similar body, which is of much value, since there are a very great number of parties, and there are many members whose allegiance to any of them is doubtful.

In the first section the authors deal with the representation of the people of Austria. There is one delegate to every 62,239 inhabitants. The United Kingdom has one to every 51,517 inhabitants, and Norway one to every 16,386. The number of delegates of the different provinces of Austria is very various. In Salzburg, for instance, there is one to every 30,282, and in Galicia only one to every 86,000. A table is given showing similar figures for the United Kingdom, Germany, Italy, and Sweden, one or two of the largest and smallest constituencies being given for each country. The proportion of voters to the whole population is the next subject treated of. The table on p. 10 shows this proportion in the case of nine of the principal European powers. France heads the list, 25·6 per cent. of her population being voters. In Germany and Wurtemberg, where universal suffrage also prevails, the proportion is also high. The next after them is the United Kingdom, of whose population 8·7 per cent. are voters. In Austria the proportion is 5·9. A further table shows, in the case of five foreign countries, the constituencies in which this proportion is highest and lowest. In one Italian constituency the electoral body is only 0·7 per cent. of the population. In Austria there are four classes of electors: (1) landowners, (2) chambers of trade and industry, (3) cities, markets, and industrial places, (4) rural communes. The latter form the great mass of the voters, but they do not elect more than two-fifths of the house, while the industrial localities return very nearly one-third. Over the whole of Austria the proportion of voters to population is in the urban constituencies 5·05 per cent. and in the rural constituencies 6·67 per cent. The tables of the third section show, in general and in detail, how the electoral body has changed in Austria during the period 1873-79. There are 163 less landed proprietors than there were, and generally the loss of voting power is chiefly in the rural districts, for in the towns and other urban constituencies there is, in the majority of cases, an increase; but when allowance is made for the increase of population that has taken place between 1873 and 1879, amounting, the authors tell us, to over a million, the net result of the comparison between the two years is that the proportion of persons qualified by their property to vote is lower than it was.

The authors give a table showing the proportion of voters to population in the principal foreign countries at two or more recent dates. In France it seems that this proportion has been diminishing, while in the United Kingdom it is on the increase. The fourth section discusses the actual voting which took place in recent Austrian elections. Of the large landowners 54 per cent. only took part in the election of 1879, against 57 per cent. in 1873. Of the chambers of commerce 88 per cent. voted in 1879 against 81 in 1873. Of the urban constituencies, the percentages were 57 against 60, and of the rural constituencies, 94 against 91. In

the case of these last, it must be remembered that the figures refer to the *electors*, the secondary, not the primary voters. For the election in the rural constituencies of Austria is carried on by a double process, as is the case in the United States in the presidential election. The "primary" rural voters who actually took part in the Reichsrath election of 1879 were only 32 per cent., as mentioned before, of the whole of their class. With regard to the increasing political apathy shown by the qualified voters of the large towns, the authors remark that we here meet with the paradox, that "in these special centres of culture and intellectual movement, especially in the most populous cities, the franchise is regarded more in the light of a burden than as an important attribute of a citizen." This serious evil is of course not confined to Austria. The United States is an example of the same unfortunate want of interest in public business. In France, on the whole, a very respectable proportion of electors make use of their right, the proportion in 1876 being about 76 per cent. In Italy an increasing use of the vote is perceptible, the percentages at the elections of 1870, 1874, and in 1876 being respectively 45, 56, and 59. In the United Kingdom the actual voters at the election of 1874 were 79 per cent. of those qualified to vote, while in 1868 the percentage was only 76½ per cent. This shows that in this country, at all events, there are as yet no signs of that decrease in the interest in the affairs of the State, which is so unfavourable a feature in the working of representative institutions in some other countries. Excluding the primary voters, who do not directly exercise the right of choosing members for the Reichsrath, but only elect electors, the actual voters in the election of 1879 were 65·6 of the qualified voters. The fifth section deals with the results of the election of 1879. The results alluded to are not, of course, political in their character. The tables given show the proportion of the total votes which was obtained by those candidates who were elected. The most remarkable thing they make clear is the high degree of unanimity which prevailed among the great landowners of Bohemia, both in 1873 and 1879, their twenty-three representatives being elected in each case by more than 95 per cent. of those voting. The election of 1879 was more animated than that of 1873 in the towns, though less so in the rural districts. In the urban constituencies in 1873 there were only eighteen elected candidates who were supported by under 60 per cent. of the voters in their respective districts, while in 1879 there were thirty-four, the majorities being narrower in the latter than in the former year. There is an appendix containing a summary of the laws on which the Austrian constitution is based, which will be of value for reference, and also elaborate tables showing the results of the election of 1879 in each separate constituency. Lastly, there are in this interesting volume four cartograms, constructed on the very best method, and showing the geographical distribution of the four chief phenomena connected with the election of 1879, namely, the proportion of electors to the whole population in urban and in rural districts, and of actual voters to electors in urban and in rural districts. Each of these four classes of phenomena is denoted by a different colour,

so that the maps cannot be confused, and the same system of shading is adopted in all the maps for denoting the different limits of percentage, representing the degrees of the phenomenon, so that the maximum of simplicity is obtained.

The Silver Question. By N. P. Van den Berg, LL.D., H.C., President of the Java Bank, Batavia, Vice-President of the Batavia Chamber of Commerce. (*Translated from the Dutch text at the Liverpool Consulate for the Netherlands.*) *With an Introductory Chapter on the Present State of the Currency in Holland and Java.* By the same author. Liverpool, James Woollard, 1879.

M. Van den Berg's pamphlet is an argument in favour of the double standard. The author is by no means an enthusiastic bi-metallist, his advocacy of the views of M. Cernuschi being due to a belief that the world has before it a choice of evils. "I would be the last," he says, "to recommend bi-metallism as a system approaching perfection; it has no doubt its weak points and faults, but under the existing circumstances, no other choice is, in my humble opinion, possible." M. Van den Berg threatens us, among other nations, with "a period of increasing misery, disturbances, and difficulties in trade and society, of which the equal has never yet been witnessed," unless we adopt the remedy in question. He apparently thinks that the depression of the last few years is due to the depreciation of silver, wholly ignoring the fact that a study of the history of prices shows that similar periods of depression always follow periods of prosperity. As for the Eastern trade, we all know now that it was, until recently, a dangerously inflated trade; that there were almost too many sound firms engaged in it, and that the number of firms whose connection with it was a source of pure mischief was considerable. It was not the depreciation of silver which produced the business of Messrs. Collie, to mention no other names. The Eastern trade would have been liable to depression as long as people like Messrs. Collie were able to get a living out of it, if silver had been at 62*d.* instead of 52*d.* M. Van den Berg's proposal that we should disorganise our currency because several other nations, of whom India is *not* one, have disorganised theirs, is not likely to be accepted by anyone who really understands the subject, especially now that trade is beginning to revive. We have probably heard the last of bi-metallism and protection for a few years, that is, until the inevitable reaction sets in, and trade is again depressed. M. Van den Berg's ignorance, or neglect, we do not know which it is, of the cyclic movement in trade, leads him into a serious error in combatting the views of an able fellow-countryman, Mr. U. G. Pierson, Director of the Netherlands Bank and Professor of Political Economy in the University of Amsterdam. M. Pierson held that the fall in the price of silver would increase India's exports and decrease her imports, and consequently cause an increased flow of silver to the East. M. Van den Berg admits that the exports have increased, but points out that from 1860-61 to 1871-72 India imported silver "amounting to the average value of more than 100 millions of rupees per annum, at the average price of 60 $\frac{9}{100}$ *d.*, while that importation during the following six years, at the average price of 57 $\frac{6}{100}$ *d.*, only

amounted to about 67 millions of rupees." So that M. Van den Berg sets a period of prosperity and depression against one of depression alone, and treats the two periods as if they were of a similar character. That this is done in perfect good faith is clear, for he actually gives the figures for the whole eighteen years in three periods of six each, when it at once appears that the average annual imports of silver during the period 1860-61 to 1865-66 were 126 million rupees, while in the period 1866-67 to 1871-72 it dropped to 74 million rupees, and that the last period, 1872-73 to 1877-78, there was only a further drop in the average amount of 7 millions, the amount being 67 millions. It is very probable that Professor Pierson's prophecy will be fulfilled during the next few years, for the excess of imports in 1876-77 and 1877-78 was much in excess of that in any year since 1865-66. The introductory chapter in which M. Van den Berg describes in a very lucid manner the present monetary position of Holland, will be useful to economists, as but little is known out of the country as to its recent currency legislation. In 1847 Holland adopted a silver standard for itself and for its eastern possessions. This arrangement worked admirably up to 1872, when it began to be feared that it would be impossible to retain silver if Germany demonetised it. A commission was appointed to inquire into the matter, and in accordance with their report, a bill was passed in 1873 empowering the executive to suspend the coinage of silver. The Government also brought in a measure for introducing gold legal tender coins, but this was abandoned as premature. This "expectant" attitude of Holland lasted till 1875, when it was generally agreed that it would be dangerous, in the face of the continued sales of silver by Germany, and the heavy fall in the exchange on London, to wait any longer. An Act for allowing the coinage of gold, the gold to be legal tender concurrently with silver, was passed in July 1875. The exchange promptly advanced so much that it was soon found that there was a difficulty in retaining gold in circulation, and in 1876 it was proposed to demonetise silver and adopt a single gold standard. This was not agreed to, and the law of 1875 was renewed. At the same time a proposal to give the eastern possessions of Holland a gold standard was rejected, and as the law of 1875 expressly did not apply to them, they continued until 1877 to use the single silver standard. In that year they became like the mother country—bi-metallic. M. Van den Berg admits that the silver standard had answered admirably in the East, and that the people liked it. It was the outcry of the merchants which caused its abandonment. They will probably have reason to repent their rashness. Holland appears, from this narrative, to be an example of the fatal error of meddling with a good currency. When once a country enters on this course, there is no end to the trouble and inconvenience it must endure. Few of the delusions that become rife during a period of depression of trade are more mischievous, or more seductive to business men smarting from a succession of losses, than the notion that prosperity may be restored by a little ingenious tampering with the currency. The Dutch experiment has only begun, and it will be interesting to

see how those who have been so eager to change their country's currency, lest silver should fall further, will act when it rises, as it very likely will, to something like its old price.

Der Einfluss des Agios auf den Aussenhandel. Von Dr. B. Weisz. (Verlag von Alfred Hölder, K.K. Hofund Universitäts Buchhändler.)

Dr. B. Weisz's pamphlet is a detailed examination of the effect of the premium on silver which has existed in Austria-Hungary for the last twenty-five years, on the foreign trade of the country. He analyses the figures of the trade for each year, comparing them with the amount of the premium. All the important articles imported or exported are thus dealt with. There are also tables showing the variations which take place in the various months. Dr. Weisz's chief conclusions are these; that (1) the foreign trade has increased independently of and in spite of the fluctuations in the premium. That (2) the increase in trade extends to the imports as well as to the exports, but the increase is greater in the exports in case of a high premium, and in the imports in case of a low one. (3) The excess of imports was greatest when the premium was greatest. (4) These results hold good, with some discrepancies, for each of the individual commodities. (5) The import of the precious metals and the premium are inversely related to one another. (6) The imports of the precious metals do not move parallel with the trade balance. (7) Effect of the premium on the movement of trade varies according as it arises from a change in the mint price of silver, or from a change in the value of the paper money. (8) The more complex the economic system becomes, the quicker do prices follow the fluctuations of trade, and the more restricted is the influence of the premium on the movement of trade. (9) It is impossible to give any measure of the degree in which the premium influences trade.

Foreign Work and English Wages, considered with Reference to the Depression of Trade. By Thomas Brassey, M.P. (Longmans, Green and Co.).

Seven years ago Mr. Brassey published a valuable contribution to the solution of the labour question, entitled "Work and Wages." Then the trade of England was rapidly advancing towards the crisis which terminates the prosperous half of the economic cycle. But much of it had reference to the state of mind which was pretty widely prevalent in the early part of 1869, when there were loud complaints that we were being ruined by foreign competition, and that the cause of the evil was the attitude of the workmen as regards the wages question. Since then England has passed through another period of depressed trade, during which the same complaints have been made, and the same charges brought against the men, with the addition, that they are less efficient than they used to be. Mr. Brassey was able to show by means of an extensive set of facts, how erroneous were the opinions of those who imagined that because a few tons of Belgian iron, or half a dozen Swiss locomotives were imported into England, English industry was destined to succumb to the growing intensity of foreign competition. In his new volume, Mr. Brassey takes up the same

subject, and is again able to vindicate the character of the British workman as the most efficient producer in the world. He says, "For the workman I contend that, with all his admitted faults, and notwithstanding his incessant clamour for higher wages in prosperous seasons, and his hopeless resistance to reductions in adverse times, he stands before all his rivals in many essential qualities. The faults of the British workmen seem inseparable from their characteristic national virtues. As M. Renan truly says, 'On a toujours les défauts de ses qualités.' Beaten we may be at last by the exhaustion of our national resources, but I do not believe that we shall ever be beaten through the inferiority of the iron-workers, the spinners, and the weavers of the United Kingdom. Their habits of industry are derived by inheritance from their forefathers, confirmed by the example of their fellow-workmen, and stimulated by emulation. Their labours are wrought in the most favourable climate in the world for the development of the bodily and mental energy of man." Mr. Brassey commences his book with a discussion of the depression of trade which has lasted so long, and which we now find to be passing away, as all previous depressions of trade have done. The evils of depression were considerable, but their extent was exaggerated and, in some respect, their nature misunderstood. "The comparatively small increase in pauperism is a proof that, while their earnings may have been contracted, the masses of the population can still secure a livelihood. The continued growth of capital is established by the activity with which building operations have been prosecuted in the large towns, and by the extensive reclamations of land in the rural districts." Mr. Brassey thinks that the depression is due to the waste of capital caused by over-production, reckless lending to bankrupt nations, the tariffs of foreign countries, and the succession of bad harvests, as well as the prostration of commercial energy in the United States and elsewhere. He mentions the depreciation of silver, but lends no countenance to the theory that any part of the depression is due to this cause. He next discusses the general fall in prices, and alludes to the probability of the world's gold supply becoming deficient. He then treats of the cotton trade, the iron trade, and the agricultural interest in successive chapters. As regards cotton, he points out that the operatives' proposal, that the mills should only work short time in order to limit production, was rejected by the masters with some indignation, but that the subsequent stoppage of many of the weaker concerns came to much the same thing, though it was, no doubt, an economically better process. Mr. Brassey objects in studiously moderate language to the attempt of the men to "dictate a commercial policy to their employers," since they cannot possibly be judges of the questions involved. He attributes the collapse of our eastern trade to the "unprincipled and reckless administration of reckless merchants and pseudo-capitalists." Mr. Brassey's experience does not support the belief that our cotton goods are worse than those of other countries, or that we have lost much business from this cause. The information regarding the iron trade is very valuable, and deserves careful attention. He has come to the conclusion that we do not sufficiently study the special wants

of our customers in various parts of the globe. The Americans do, and, as a natural consequence, their articles are in some cases preferred to ours. Mr. Brassey has much to say about trades unions and on co-operation. With regard to co-operative industry, he remarks that "shareholders not trained to business are seldom happy in their selection of directors, and corporate can seldom be as successful as individual management." He thinks therefore, that manufacturing enterprise on the joint stock system does not offer the right kind of investment for the savings of workmen. The facilities for the investment of small savings are much greater in France than in England, and Mr. Brassey thinks that it would be worth while to imitate the French policy in this respect. "In this country a whole stratum of small investors remains at present untapped." Consols, and other solid stocks of a similar character, might be offered to the poorer classes in small sums. Mr. Brassey's chapter on "The Accumulation of Capital and the Law of Wages," is of special interest just now, when in many parts of England there are disputes as to whether wages ought not to be advanced now. Wages in the iron trade, he says, are now at least as low as they were ten years ago, and the same is true of colliers' wages. When he wrote, Mr. Brassey looked forward to an improvement in trade which was yet non-existent, but the consequences of which, in the way of a rise in wages, he clearly foresaw. Since the publication of his work, the improvement has come, and even the rise in wages has commenced in some departments.

Statistical Abstract of the United States. First number, 1878. Prepared by the Chief of the Bureau of Statistics, Treasury Department.

This work is specially interesting, both as being the first of the kind issued by the United States, and on account of the value of the information now for the first time brought together in a handy form. It is modelled on our own Abstract, but of course differs from it considerably as regards details both of matter and arrangement. It contains statistical information for a series of years, varying in length with each special subject, on "Finance, coinage, commerce, immigration, shipping, the postal service, population, railroads, agriculture, coal, and iron." The first tables relate to the public revenue and expenditure for each year from 1833 onwards. There are also tables giving details of the various sources of income, and giving the amount of the public debt each year from 1791. The next set of tables relates to banks. The number, capital, and earnings of the national banks are given for each half-year since 1st September, 1869. It will be seen that these institutions continued steadily to increase in number until 1st March, 1877, when a tendency to decrease became apparent. During 1878 the diminution became comparatively rapid. Their dividends have been falling since 1st September, 1874. The table showing the losses to creditors of the national banks for the fifteen years during which the system has been in operation is very satisfactory. Sixty-nine banks, with a capital of 16 million dollars, have failed. On 1st September, 1878, there were in existence 2,047 banks, with a capital of 470 $\frac{1}{4}$ million dollars. The number of failures is therefore very

moderate; and the excellence of the arrangements is further shown by the fact that of the claims on these 69 defaulting banks nearly 60 per cent. were paid. The savings bank statistics show that from 1873-74 to 1875-76 the amount of the deposits increased rapidly; that during 1876-77 they fell off, but again increased in 1877-78. Their amount for the latter year was the large sum of 80 million dollars (or 136 million pounds). Of this, Massachusetts and New York together contribute 563 million dollars (113 million pounds). The information regarding the operations of the United States' Mint extends from the three-year period, 1793-95, and is continued from 1796 onward by single years. The annual production of gold and silver since 1853 is given, and also, in another table, the average price of silver bullion (both British standard and United States' standard) since 1852, with the relative value of gold and silver corresponding to each price. The tables relating to imports and exports occupy a great number of pages. Table 23, showing the totals of each, together with the excess of one over the other from 1835 to 1878 will be found very useful. The very great excess of exports of goods which has arisen since 1875 is a new phenomenon in the history of the United States. Counting bullion as produce, which in the case of the United States it of course is, the phenomenon is not very unusual in character, though it is in degree. The magnitude of these exports has already exercised a portion of its natural effect in stimulating the demand for foreign goods, those of England especially. Details of the imports and exports from and to each country are given for a period of thirteen years, and the exports and imports of each article are given for ten years, the last year in each case being 1878. Coming to the statistics of production, we have the amount of the cotton crop each year from 1849-78, except the years 1862-65, of which there is no record. From this it appears that the crop of 1878 amounted to 4,811,000 bales, the biggest but one on record, its rival being 1860, with 4,824,000 bales. In the quality of the produce, 1878 had rather the advantage, the average weight per bale in that year being 452 lbs., against 445 lbs. in 1860. During the last three years the export of manufactured cottons has increased rapidly. In 1878 its value was 11,439,000 dollars. The production of wheat and maize in 1878 was the largest on record in each case. It is worth noting that the home consumption of maize seems to have been decreasing, and that of wheat increasing of late. In 1877 5·34 bushels of wheat per head were consumed; in 1878 the amount rose to 6·09 bushels. The highest rate previously recorded was in 1870, 5·81 bushels per head. Passing over some other tables, we come to the navigation and shipping returns. From the tables of the tonnage of the merchant marine of the United States since 1859, it appears that there is no apparent tendency to increase in this important department, the tonnage being less in 1878 than in 1869. Comparison with any previous year is not possible, because the tonnage was then measured on a different plan from that now in use, and during the four years 1865-68 a portion of the tonnage is returned under each mode of measurement. The falling off is not in the vessels engaged

in foreign trade, in which, on the contrary, there is a moderate increase, but in those engaged in the whale and mackerel fisheries. The tonnage built also seems slow to increase. In the prosperous year 1874 it was nearly 433,000 tons. In 1877 it dropped to 176,600 tons, but in 1878 it rose once more to 235,500 tons. The table showing the number of miles of railroad in operation each year from 1830 is taken from *Poor's Manual* for 1878. The increase in the mileage during the prosperous years 1869-73 averaged more than 5,000 miles per year, while previously and since it has never been above 3,600 miles, the amount for 1856. The abstract seems carefully prepared on the whole. We regret that Mr. Nimmo has once or twice allowed the headings of the columns of a table to read vertically, as on pages 25, 121, 129; this is a wholly unnecessary blemish on what is otherwise excellently arranged matter. We note a small discrepancy between the two tables relating to savings banks. One gives the deposits for 1876-77 as 866,498,452 dollars, the other as 866,218,306. Both the totals, in which these sums are items, are correctly added up, and it is therefore not possible to make out which is right.

Statistisches Jahrbuch für das Jahr 1876. III, IV Heft. Herausgegeben von der K.K. Statistischen Central-Commission. Wien, 1879.

The last published volume of the Austro-Hungarian *Jahrbuch* contains statistics of the industry and trade, and of the railways, roads, river and ocean navigation, posts, and telegraphs of the Dual Monarchy.

Essai de Statistique Générale de l'Egypte. Deuxième vol. Cairo, 1879.

The second volume of the *Statistics of Egypt*, prepared by M. Amici, the chief of the Bureau of Statistics, contains information regarding the movement of population among the foreigners resident in Egypt. There are also a great number of tables relating to agriculture. They are arranged in three sections, the first dealing with the produce raised during the summer period of cultivation, the second with those raised during the autumn, which is the period of the rise in the Nile; and the third section with the winter crops. There is also a table showing the dates of the maximum and minimum Niles in each year, from 1848 to 1878. This table is supplemented by a diagram showing the same facts. We then come to tables giving information as to the state of public instruction in Egypt. There has been some improvement of late years, but the percentage of the total population at school is only 2.5. As girls have hitherto been taught nothing, this figure does not quite represent the real amount of educational work that is being done in Egypt; some allowance should be made for the female portion of the population who cannot be expected to appear in schools at present. In any case, however, the percentage is a low one. An attempt at founding girls' schools was made by the Princess Chachma-Afet, wife of the late Khedive, and the institution she called into existence is still carrying on its work satisfactorily. The concluding portion of the volume deals with the railways and telegraphs of Egypt. Of the former there were, at the end of

1878, 1,494 kilometres (896 miles). A list is given of the names of all the stations on the Egyptian railways, with a statement as to whether they are or are not furnished with telegraph arrangements, and are authorised for dealing with goods (autorisée au service des marchandises). The telegraph administrative system was in process of reconstruction when M. Amici wrote. Including the Soudan there were 7,841 kilometres of telegraph lines in Egypt at the end of 1875.

The Economics of Industry. By Alfred Marshall, Principal of University College, Bristol, late Fellow of St. John's College, Cambridge; and Mary Paley Marshall, late Lecturer at Newnham Hall, Cambridge. Macmillan and Co., 1879.

The authors of this able little volume state in their preface that it was designed to meet the wants of the Cambridge University Extension lecturers, and that it is "an attempt to construct on the lines laid down in Mill's *Political Economy* a theory of value, wages, and profits which shall include the chief results of the work of the present generation of economists." The authors intend to publish a companion volume on the *Economics of Trade and Finance*. In a work of an educational character, it is generally wise to exclude the discussion of open questions, and generally to avoid abstruseness, whether of subject or of reasoning. Such discussions are better studied by the student at a later stage. The authors of the volume before us have borne this fact in mind, and while not confining their treatise entirely to the elements of economics, they have so arranged it that a beginner can without difficulty omit all passages which deal with subjects which are for the time beyond him. The authors have adopted the term "economic science" or "economics," instead of the clumsy phrase "political economy," which is besides misleading, since its form suggests that its subject matter is an art. Many persons, from Mr. Ruskin downwards, have assumed the "economy of the State" undertakes to teach people how to get rich, and it is desirable now that economists themselves are getting clearer ideas than were formerly current as to the nature of their method, and the proper application of their results, that they should no longer use a term which obscures the subject to which it is applied. The first book is on "land, labour, and capital," and Mill's order of exposition is to a large extent retained. The elucidation and illustrations are not always Mill's. As is natural, the authors quote Bastiat with tolerable frequency, for few economic writers are better adapted to educational purposes than he. The remarks on the position of economics among the sciences are in the main excellent. It is perhaps a slight slip to speak of the "moral or social sciences," for while there are no social sciences that are not moral sciences, there are some sciences, such as psychology, which though still conveniently called moral, are not social. Psychological phenomena might exist if there were only one man in the world. Economic phenomena only begin to come into being when there are many men, *i.e.*, when there is a social state. In addition to the ordinary distinction of fixed and circulating capital, the authors further distinguish fixed capital as "specialised" or "non-specialised," according as the plant or commodities in which

the capital is fixed are more or less difficult of application to purposes other than that for which they were originally intended. For instance, a factory "fitted up with a steam-engine and overhead gear may be employed in many branches of textile manufacture, or even in the lighter metal and wood trades."

In discussing the population question the authors touch on its practical side, as it is presented to us in the form of pauperism. They remark that "the abuses of out-door relief are at present so great, that it should be abolished if they could not be diminished. But it has not been proved that it is impossible to separate the deserving from the undeserving poor." They proceed to quote with approval some words of Miss Octavia Hill, which exactly meet the case: "If the poor are to be raised to a permanently better condition, they must be dealt with as individuals and by individuals." The second book is on "normal value," meaning by "normal" what Adam Smith and others called "natural." Normal value is value as determined by free competition. There is nothing specially noticeable in the general exposition of the subject. Readers of Cairnes, Walker, Jevons, and Bagehot will be familiar with the notions here presented. The chapters on the "supply of business power," the "supply of skilled labour," and on "earnings of management," embody the results of the labours of the above modern economists, as well as of Mr. Cliffe Leslie, and will be read with interest and advantage even by those who are not beginners. In the third book market value is treated of, in so far as it can be treated without any minute investigation of the theory of money, which belongs to the economics of trade and finance. Variations in the amount of money and the extent of credit are necessarily discussed as causing fluctuations in market value or in price. The authors briefly describe the phenomena of trade cycles, and in speaking of the recent depression, remark that "statistics prove that the real income of the country is not very much less in the present time of low prices than it was in the period of high prices that went before it. The total amount of necessities, comforts, and luxuries which are enjoyed by Englishmen is but little less in 1879 than it was in 1872." In the chapter on "local variations of value" the authors remark, when speaking of the effect of wages on efficiency, that "the money wages of labourers in different parts of the world are a better measure than at first sight appears of the energy which their children are likely to have when grown up;" for "comforts and luxuries, and the opportunities of such an education as makes bright and intelligent workers, are generally scarce where necessities are plentiful." The chapters on trade unions, and on their influence are of great interest. With regard to the much disputed wages fund theory, the authors disagree with Cairnes, and hold with the majority of modern economists, that wages are the net return of labour. They are of opinion that in certain cases and under certain conditions, trades unions may raise the rate of wages permanently. That the case is hardly likely to occur is evident from the statement of the conditions. The rise cannot last unless it is "got by measures which do not seriously hinder production, and unless those who get the increased wages use them so as to

increase their efficiency and to add largely to the amount, if not of material, yet of personal capital in the country." Altogether the book is an excellent one, and if the forthcoming volume on trade and finance is as good, Mr. and Mrs. Marshall will have earned the thanks of all teachers of the so-called "dismal" science, by supplying them with a text-book that is anything but dismal.

Report upon the Vital, Social, and Economical Statistics of Glasgow for 1878. By W. West Watson, F.S.S., City Chamberlain. (Parts I and II.) Glasgow, 1879.

Mr. Watson has been obliged, on account of ill health, to publish his report in two parts. The first part contains the vital statistics of the city during the year 1878, the statistics of rainfall, and some other meteorological information. Naturally the report of the City Chamberlain on 1878 is a very gloomy one. Besides the record of the famous, or infamous, bank failure, which paralysed Glasgow, and threw not only Scotland but the whole of the United Kingdom into financial confusion, Mr. Watson quotes what he not unreasonably describes as the "astounding statement" of Mr. Phillips Bevan that, notwithstanding the sad scarcity of employment, there were 277 strikes in 1878 against 181 in 1877, of which no doubt Scotland "contributed its fair quota." Of these 277 strikes, 4 succeeded, 17 were settled by compromises, and the rest failed hopelessly. It would have been interesting if Mr. Watson had been able to give us the exact figures for Glasgow itself, or rather of the Glasgow district. No doubt the fact that so many of the population depend on various forms of the iron industry specially aggravated the distress in the neighbourhood of the Clyde, quite apart from the terrible financial disaster which befell the city of Glasgow last October. On the statistics there is little to remark, except with reference to the high rate of mortality among the children under five years. A little more detail regarding this important subject would have been advantageous, and possibly Mr. Watson may be able to devote some time to the special study of the matter, in which he is much interested. We are unable to say from the figures before us, which are very meagre, whether the rate of infant-mortality of Glasgow is much higher than that of some other large towns, but we are inclined to think it is not so. In a careful investigation it would be necessary to take sex into account as well as age, for it has been well established, that, as a rule, the death-rate for boys under one year of age is higher than that for girls. Abnormally high death-rates among very young children have not unfrequently been found to arise from the existence of customs prejudicial to their health, such as excessive wrapping up, amounting to partial suffocation. Turning to Part II, which deals with the population of Glasgow and the statistics of its trade, we find that owing to the recent agreement of the Registrar-General of England and Scotland as to the method of calculation, Mr. Watson, who has hitherto followed a method of his own, has adopted that fixed on by the two superior authorities. The three results derived from the three different modes of counting differed very little from each other, and from that obtained by the newly adopted plan. Glasgow now contains 566,940 persons—a result differing 3 per cent. from

that obtained by the Registrar-General for Scotland, $1\frac{1}{2}$ per cent. from that of Mr. Watson himself, and only $\frac{1}{2}$ per cent. from that of the Registrar-General of England. The most interesting portion of the statistics of the city for those who are not inhabitants of it, will be the figures relating to the shipping of the River Clyde. These figures show, even for 1878, a continuance of steady increase in the tonnage on the register of the port, and as might be expected, in the magnitude of the individual vessels. They also show that the tendency in the number of steamers to increase at the expense of sailing vessels has been very marked of late in Glasgow. The shipbuilding establishments of the Clyde had considerable demands on them in 1878, the tonnage launched in that year amounting to 211,989 tons as against 169,383 tons in 1877. The ruin caused by the bank failure effectually put a stop for the time to any tendency to further progress in the revival in shipbuilding, and on 31st December, 1878, only 82,784 tons were still in process of construction or contracted for, a far lower amount than at any of the corresponding dates since 1866, when the amount was only 71,869 tons. Nevertheless, Mr. Watson speaks with pardonable pride of the position of the Clyde as a great shipbuilding port, and he especially mentions the "Orient" and the "Arizona" with satisfaction. As regards the imports of sugar, tea, and tobacco, 1878 shows decreases on 1877. On the other hand, the statistics of the deposits of the "National Security" Savings Bank show that even in 1878, the process of saving went on, though more slowly than in previous years. It is interesting to know that the *number* of depositors also increased in 1878. Both these facts support the theory that times of depression are times of accumulation.

IX.—Additions to the Library during the Quarter.

Additions to the Library during the Quarter ended 31st December, 1879.

Donations.	By whom Presented.
Argentine Republic—	
Registro Estadístico de la Provincia de Buenos Aires. Año xx, 1873. lvi and 393 pp., folio. Buenos Aires, 1875	Central Statistical Office
Austria and Hungary—	
Statistisches Jahrbuch für 1876, Hefte 3, 4, und 10 ; und für 1877, Hefte 5 und 11 ; und für 1878, Heft 1. 8vo. Wien, 1879.....	Imperial Central Statistical Commission
Statistisches Jahrbuch für Ungarn, 1877, 6 ^{er} Jahrgang, Hefte 7 und 8 ; und 7 ^{er} Jahrgang, Heft 9. 8vo. Budapest, 1879.....	
Das Ungarische Unterrichts-Wesen am Schlusse des Schuljahres, 1877-78. Von Dr. J. H. Schwicker. xvi and 421 pp. 4to. Budapest, 1879	Royal Statistical Bureau
	Ministry for Religion and Education

Donations—Contd.

Donations.	By whom Presented.
Belgium—	
Exposé de la situation du Royaume de 1861 à 1875, 4 ^e et 5 ^e Fascicules. Imp. 8vo. Bruxelles.....	Ministry of the Interior
China—	
Imperial Maritime Customs—	
I. <i>Statistical Series—</i>	
Customs Gazette. Nos. xli and xlii, January— June, 1879.....	R. Hart, Esq., In- specteur - General, Shanghai
Returns of Trade at the Treaty Ports for 1878 Parts 1 and 2 (20th issue).....	
II. <i>Special Series, No. 2—</i>	
Medical Reports for half-year ended 31st March, 1879 (17th issue). 4to. Shanghai, 1879.....	
Denmark—	
Nationalökonomisk Tidsskrift, Bind 5—13, og Hæfte 1—6 af 14. 8vo. Kjöbenhavn, 1875-79.....	Danish Political Eco- nomy Society
Egypt—	
Essai de Statistique Générale de l'Egypte, 1873-77. 1 ^{er} et 2 ^e volumes. Maps, 4to. Le Caire, 1879	Directorate - General of Statistics :
Le Commerce Extérieur, pendant l'années 1874-78. pp. vii and 220. 4to. Le Caire, 1879	
Ministry of the In- terior	
France—	
Annuaire Statistique de la, 2 ^e année, 1879. xxvi and 600 pp., imp. 8vo. Paris	Ministry of Agricul- ture and Commerce
Statistique de la, nouvelle série, tome vi, année 1876. xcvii and 436 pp., folio. Paris, 1879	
Tableau Général du Commerce de la, pendant l'année 1878. lxxi and 739 pp., 4to. Paris, 1879	
Compte Général de l'Administration de la Justice Cri- minelle, pendant l'année 1877. 4to. Paris, 1879	Ministry of Justice
Compte Général de l'Administration de la Justice Civile et Commerciale pendant l'année 1877. 4to. Paris, 1879	
Rapport sur le Commerce et le Tonnage relatifs au Canal Interocéanique. Rédigé par M. Levasseur. 95 pp., map, 4to. Paris, 1879	M. E. Levasseur
Ministère des Finances. Bulletin de Statistique et de legislation comparée, 3 ^e année, Septembre—Novembre, 1879. 8vo. Paris	M. A. de Foville
Révue Bibliographique Universelle—	
Partie Littéraire, tome xxv, Nos. 3—5, Septembre— Novembre	The Editor
„ Technique, tome xxvii, Nos. 9—11, Septembre —Novembre. 8vo. Paris, 1879	
Révue Géographique Internationale, 4 ^e année, Nos. 44 —46, June—Août. 1879. 4to. Paris	The Society
Société de Statistique de Paris, Journal de la, xx ^e année. 1879. Nos. 10—12, Octobre—Decembre. Imp. 8vo. Paris	
Germany—	
Monatshefte zur Statistik des Deutschen Reichs. Band xxxvii, Hefte 8—10. (August—Oktober, 1879.) 4to. Berlin.....	Imperial Statistical Office

Donations—Contd.

Donations.	By whom Presented.
Germany—Contd.	
Conferenz der Directoren der Statistischen Bureaux Deutscher Städte, Berlin, 4 th —6 th October, 1879. 40 pp., folio. Berlin	
BERLIN. Statistisches Jahrbuch für Volkswirtschaft und Statistik, 1 ^{er} und 2 ^e Jahrgang. 8vo. 1874-75	Statistical Bureau of Berlin
„ Veröffentlichungen des Statistischen Bureau's der Stadt; Eheschliessungen, Geburten, Sterbefälle und Witterung. Nos. 1—59, 1 ^e Jan.—29 ^e Nov., 1879. 4to.....	
FRANKFURT-A-M. Jahresbericht über die Verwaltung des Medicinalwesens, u.s.w. der Stadt. Jahrgang xxii, 1878. 8vo. 1879	Medical Society, Frankfort
„ Beiträge zur Statistik der Stadt, 3 ^{er} Band, 4 ^{es} Heft. 4to. 1879	
HAMBURG. Handel und Schifffahrt, 1878. 216 pp., folio. 1879	Bureau of Trade Sta- tistics The German Consul- General
Another copy of the above	
SAXONY. Kalendar und Statistisches Jahrbuch für das Königreich Sachsen, auf das Jahr 1880. 12mo. Dresden	Statistical Bureau : Ministry of In- terior
„ Zeitschrift des K. Sächsischen Statistischen Bureaus, Jahrgang xxiv, 1878; Hefte 3 und 4. 4to. Dresden, 1879	
Italy—	
Annali di Agricoltura, 1878, Nos. 4—7, e 11; e 1879, Nos. 8, 10—12, 14 e 17. 8vo. Roma, Milano	
Annali dell' Industria e del Commercio, 1879. No. 1—9. 8vo. Roma, 1879.....	
Annali di Statistica. Serie 2 ^a , vol. 7, 8 e 9, 1879. Diagrams. 8vo. Roma, 1879	
Atti Parlamentari. Sessione del 1878-79. Camera dei Deputati, No. 44. Relazione della Commissione Centrale di Sindacato sulla Amministrazione dell' Asse Ecclesiastico per l'anno 1878. 4to. Roma	
Bilanci Provinciali, anno xviii. 1879. xx e 46 pp., imp. 8vo. Roma.....	
Bollettino Settimanale dei Prezzi di Alcuni dei princi- pali Prodotti Agrari. Anno 1879. Nos. 33—42, imp. 8vo. Roma.....	Directorate-General of Statistics : Ministry of Agricul- ture, Industry, and Commerce
Bollettino Bimestrale delle Situazioni dei Conti. Anno x, No. 3, Giugno, 1879. Imp. 8vo. Roma....	
Bollettino Bimestrale del Risparmio, Anno 4, Nos. 3 e 4, Giugno—Agosto. Imp. 8vo. Roma, 1879.....	
Bollettino mensile delle Situazioni dei Conti degli Istituti d'Emissione. Anno x, Nos. 6—8, Giugno— Agosto, 1879. Imp. 8vo. Roma	
Bollettino di Notizie Commerciali. Nos. 22—24, Agosto—Ott, 1879. Imp. 8vo. Roma	
Bollettino Consolare. Vol. xv, fasc. 7—10, Luglio— Ott, 1879. 8vo. Roma	
Statistica del Commercio Speciale di Importazione e di Exportazione dal Gennaio—Settembre, 1879. 4to. Roma.....	

Donations—Contd.

Donations.	By whom Presented.
Italy—Contd.	
Ministero delle Finanze, Annuario del, pel 1879 ; anno xviii. xix and 952 pp., 8vo. Roma	Directorate - General of Statistics : Ministry of Agricul- ture, Industry, and Commerce
Navigazione, Movimento della, nei Porti del Regno, anno xviii, 1878. Parte 1 ^a , e appendice. 8vo. Roma, 1879	
Relazione sulle condizione Sanitarie dei corpi della Regia Marina durante il biennio 1877-78. 106 pp. 8vo. Roma, Firenze, 1879.....	
Rivista Europea, Rivista Internazionale. Vol. xv, fasc. 2—4 e vol. xvi, fasc. 1—3, 1879. Imp. 8vo. Firenze	
Società Italiana d'Igiene, Giornale della, anno 1 ^o , No. 5, Sett.—Ott. Diagrams, 8vo. Milano, 1879	The Editor
	The Society
Japan. Imperial Meteorological Observatory, Tokai. Report for 1878. Sheet, 4to.....	Statistical Bureau, Tokio
Netherlands—	
Staatkundig en Staathuishoudkundig Jaarboekje, uitgegeven door de vereeniging voor de Statistiek ; 31 ^{ste} Jaargang, 1879. 12mo. Amsterdam.....	Statistical Society of the Netherlands
Statistiek van de Schulden der Polders en Waters- chappen, bewerkt door de Vereeniging voor de Sta- tistiek. 93 pp., 4to. S. Gravenhage, 1879.....	
Norway—	
<i>Officielle Statistik—</i>	
C. No. 5. Tabelle over de Spedalske i Norge i aaret 1878. (L'Éléphantiasis)	Central Statistical Bureau
„ „ 5b. Oversigt over Sindssygeasylernes Virk- somhed i aaret 1878. (Asiles d'Aliénés)	
F. „ 1. Stats Telegrafs Statistik for aaret 1878	
„ „ 2. Statistiske opgaver vedkommende det Norske Postvæsen for aaret 1878. 4to, Christiania, 1879	
Portugal—	
Bases d'un Plan d'Etudes Commerciales présentées au Congrès International de Géographie Commerciale à Bruxelles par la Société de Géographie de Lisbonne. 31 pp. 8vo. Lisbonne, 1879	The Society
Roumania—	
<i>Statistica din—</i>	
Indicile Comunelor din Dobrogea (Nomenclature générale des Communes de la Dobrodja.) 29 and xvii pp., folio. Bucuresci, 1879	Central Statistical Office: Ministry of the Interior
Miscarea populatiunii pe anu 1876, dupa Registrele starii civile (Mouvement de la Population). 93 pp., folio. Bucuresci, 1879	
Spain. Sociedad Geográfica de Madrid. Boletín de la. Tomo i, No. 1, 1876 ; tomo vi, No. 1, 1879, and tomo vii, Nos. 2—4, Juli—Ott. 8vo. Madrid.....	The Society

Donations—Contd.

Donations.	By whom Presented
United States—	
Agriculture, Department of, Special Report on the Condition of Crops. Nos. 17 and 19, September and November, 1879. 8vo. Washington	The Commissioner for Agriculture
<i>Bureau of Statistics—</i>	
Imports and Exports, Summary Statement of, No. 12, June, and Nos. 2 and 3, August and September, 1879.....	Joseph Nimmo, Esq., jun.
Quarterly Report of the, to 30th June, 1879 (No. 4, 1878-79). 8vo. Washington	
Statistical Abstract for 1878. No. 1. 8vo. Washington, 1879	
<i>Centennial Commission, International Exhibition, 1876—</i>	
Report of the Director-General, including the Reports of Bureaus of Administration. Vols. i and ii.....	E. T. Steel, Esq., Chairman of Committee on Printing
Reports of the President, Secretary, and Executive Committee, with Journal of the Final Session	
Appendix to the Reports of the Commission and Centennial Board of Finance. Cloth, maps, plates, &c., 8vo.....	
Description of the Grounds and Buildings of the Exhibition. Cloth, maps, plates, &c., imp. 8vo. Philadelphia, 1879	
Comptroller of the Currency, Annual Report of the, 1st December, 1879. 75 pp., 8vo. Washington....	John Jay Knox, Esq.
Education, Report of the Commissioner of, for 1877. Parts 1 and 2. 8vo. Washington, 1879	Bureau of Education
Labor in Europe, state of, in 1878. Reports from the United States' Consuls in the several countries of Europe. 428 pp., cloth, 8vo. Washington, 1879	—
War of the Rebellion. The Medical and Surgical History of the. Part 2, vol. i. Medical History (2nd issue). 869 pp., cloth, plates, diagrams, &c., 4to. Washington, 1879	Surgeon-General, U.S. Army
RHODE ISLAND, Twenty-fourth Annual Report upon the Births, Marriages, and Deaths in the City of Providence, for 1878. 8vo. Providence, 1879	Dr. F. M. Snow
American Geographical Society, Bulletin of the, 1878. Nos. 5 and 6, and 1879, No. 1. 8vo. New York	The Society
American Statistical Review, The, by Charles S. Hill. Vol. i, part 2, 1879. 8vo. New York.....	
Bankers' Magazine, New York. Series 4, vol. xiv, Nos. 4—6, October—December, 1879. 8vo	"
Franklin Institute, Philadelphia, Journal of the. Series 3, vol. lxxviii, Nos. 3—5, September—November, 1879. 8vo.	The Institute
Western, The, new series, vol. v, No. 6, November—December, 1879. 8vo. St. Louis	The Editor

Donations—Contd.

Donations.	By whom Presented.
India, Colonial, and other Possessions.	
Canada, Dominion of—	
Agriculture, Report of the Minister of, for 1878	J. M. Courtney, Esq., Deputy Minister of Finance
<i>Inland Revenues of the Dominion of—</i>	
Report for 1878	
Supplement No. 1. Canal Statistics for 1878	
„ No. 2. Fifth Report on Weights and Measures	
„ No. 3. Third Report on Adulteration of Food	
Department of the Interior, Report for 1878	
Minister of Justice, Report as to Penitentiaries, for 1878	
Marine and Fisheries Department, Eleventh Annual Report of, for 1878	
Militia, Fifth Annual Report on the State of, for 1878	
Postmaster-General, Report of the, for 1878	
Public Accounts, for 1878	
Public Works, Annual Report of the Minister of, 1877-78	
Secretary of State, Report of the, for 1878	
Trade and Navigation Tables, for 1878. 8vo. Ottawa, 1878-79	
India, British—	
Census of the Central Provinces, 1872. Folio	India Office
Report on Sanitary Measures in 1877-78, with Miscellaneous Information up to June, 1879. Vol. xi. [C-2415]. Folio, 1879	
Trade and Navigation, Monthly Returns of. Current numbers	
BENGAL. <i>Asiatic Society of—</i>	Indian Government
Proceedings, No. 4, April, and No. 7, July, 1879	
Journal, vol. xlviii, part 1, Nos. 1 and 2, and part 2, Nos. 1 and 2, 1879, plates and diagrams, 8vo.	
Calcutta	
The Society	
New South Wales—	
Twenty-third Annual Report of the Registrar-General on Vital Statistics, for 1878. Folio. 1879	Registrar-General of New South Wales
Statistical Register of, for 1878. Folio. Sydney, 1879	
Another copy of the above	Agent-General for New South Wales
New Zealand. Friendly Societies, 2nd Annual Report by the Registrar of. Folio	
Registrar of Friendly Societies	
Queensland. Nineteenth Annual Report on Vital Statistics, 1878. Folio. 1879	
Registrar-General	
South Australia—	
Transactions of the Philosophical Society of Adelaide for 1877-78. 135 pp., plates, 8vo.	The Society
Annual Report of the South Australian Institute, 1878-79, 12 pp., post 4to. Adelaide	
The Institute	

Donations—Contd.

Donations.	By whom Presented.
Tasmania, Statistics of the Colony of, for 1878. Folio. Hobart Town	E. C. Nowell, Esq., Government Statist
Victoria—	
Statistical Register of the Colony of, for 1878.	Agent-General for Victoria
Part 1. Blue Book	
„ 2. Population	
„ 3. Finance, &c.	
„ 4. Vital Statistics, &c. Folio	
„ 5. Law, Crime, &c.	
„ 6. Production	H. H. Hayter, Esq.
Australasian Statistics for 1878, with Report by the Government Statist. Folio	
Mineral Statistics for 1878. Folio. Melbourne	Minister of Mines
Reports of the Mining Surveyors and Registrars, quarter ended 30th June, 1879. Folio.	
Royal Society of, Transactions of the. Vol. xv., xxviii and 79 pp., plate and diagrams. 8vo. Melbourne, 1879	The Society
Melbourne University, Calendar for 1878-80. xii and 289 pp., cloth, 12mo.	
	Sir Redmond Barry, Chancellor
<hr/>	
United Kingdom—	
Agricultural Returns of Great Britain, with Abstract Returns for the United Kingdom [C-2407]. 8vo. 1879	Board of Trade.
Trade and Navigation, Monthly Returns of. Current numbers	
<i>Agriculture, Central Chamber of</i> , Annual Reports of the Council of the. Nos. 3—14, 1868-79	Capt. P. G. Craigie, Secretary
Constitution and Laws of Association of, with Bye- laws. 8vo. London, 1879	
Building Societies, Return of the, Incorporated under the Building Societies Acts, 1874 and 1875, for the year ending 1878, including Great Britain and Ire- land. Parl. paper 296, 1879. Folio.	Registrar of Friendly Societies
<i>Associated Chambers of Commerce</i> , Annual Reports of, Nos. 1, 4, 5, 7, 8—16, 18, 19, 1860 and 1863, 64, 66, 67-75, 1877-78	
Reprint of Debate in House of Commons on Mr. S. S. Lloyd's Motion for a Minister of Commerce and Agriculture	James Hole, Esq.
Resolutions adopted at a Special Meeting held at Belfast, August, 1879	
The Canadian Tariff, a Paper prepared by Sir A. T. Galt, for the Belfast Meeting. 8vo. London, 1879	
Capital and Labour, vol. vi, No. 289, containing Report of Meetings at Belfast, August, 1879. Folio	
Factories, Return of the Number authorised to be inspected, with the Number of Persons employed and the Number of Spindles, Looms, &c., used, up to 31st October, 1879. Parl. paper No. 324, 1879. Folio....	A. Redgrave, Esq., C.B.
Railways, Summary of Statistics of, for the years 1874-78, compiled from the Returns of the Board of Trade, by W. T. Dent, N.E.R. Sheets. 1879	
	The Compiler

Donations—Contd.

Donations.	By whom Presented.
England and Wales—	
Friendly Societies, &c., Reports, 1877. Part II (A), Appendices E, F, and G. Nos. 388—I. Folio	Registrar-General of Friendly Societies
Local Government Board, Eighth Annual Report of the, 1878-79 [C-2372]. 8vo. 1879	
Quarterly Returns of Marriages, Births, and Deaths. Nos. 116, 120, and 123. 8vo. 1877-79	The Board
Weekly Returns of Births and Deaths in London and in twenty other large towns (several numbers to complete the Society's series); and current numbers. 8vo.	Registrar-General of England
Woods, Forests, and Land Revenues, Works and Buildings, Reports of H.M. Commissioners, No. 57, for 1879 (and several earlier Reports to complete the series). Folio	Commissioners of H.M. Woods and Forests, &c.
Ireland—	
Weekly Returns of Births and Deaths of eight large towns, current numbers, with an Annual Summary. 8vo.	Registrar-General of Ireland
Quarterly Returns of the Marriages to June, and Births, and Deaths to September, 1879. No. 63. 8vo. Dublin	
Statistical and Social Inquiry, Society of. Journal of the. Vol. vii, No. 6, part 55, July, 1879. 8vo. Dublin	The Society
Scotland—	
Weekly and Monthly Returns of Births, Deaths, and Marriages in the eight principal towns of, current numbers. 8vo.	Registrar-General of Scotland
Quarterly Return of Births, Deaths, and Marriages in, to September, 1879. No. 99. 8vo	
GLASGOW—	
Mortality tables of the city of, with Remarks by the Medical Officer, for the quarters ended 30th June and September, 1879. 8vo.	Dr. J. B. Russell
Proceedings of the Philosophical Society of, 1878-79. Vol. xi, No. 2, plates, &c., 8vo.	The Society
Unemployed Relief Fund during 1878-79, Report of the Administration of. By K. M. Macleod. 48 pp. 8vo. Glasgow, 1879	Acting Committee of the Fund
Authors, &c.—	
ATKINSON (EDWARD). Labor and Capital, Allies not Enemies. (Harper's Half Hour Series.) 98 pp., 32mo. New York. 1879.	The Author
ATKINSON (EDWARD). Chart giving a graphical presentation of the comparative areas of the States and Territories of the United States and the Countries of Europe. 1 sheet. Boston	
BOURNE (STEPHEN). Extended Colonisation a Necessity to the Mother Country. 31 pp., 8vo. 1879	"
BRASSEY (THOMAS, M.P.). Foreign Work and English Wages considered with reference to the Depression of Trade. 417 pp., cloth, 8vo. London, 1879	Messrs. Longman and Co.

Donations—Contd.

Donations.	By whom Presented.
Authors, &c.—Contd.	
CERNUSCHI (HENRI). Bi-metallism in England and Abroad; an Answer to a Letter from H. H. Gibbs, Esq. 52 pp., 8vo. London, 1879	The Author
CONI (DR. E. R.). Movimiento de la Poblacion de Buenos Aires. 60 pp.	
„ Apuntes sobre el Movimiento de la Poblacion de Buenos Aires durante el año 1878. 86 pp....	„
„ La Mortalidad Infantil en Buenos Aires. 62 pp.....	
„ El Servicio Sanitario de Buenos Aires. 16 pp., 8vo. Buenos Aires, 1879	
CORNISH (W. R., F.R.C.S.). The Influence of Famine on the Growth of Population. 24 pp., diagrams, folio. Madras, 1879	„
COXWORTHY (FRANKLIN). Electricity the sole agent in Creation. 15 pp., 8vo.	„
HALL (E. HEPPLE). Lands of Plenty, British North America, for Health, Sport and Profit. xii and 192 pp., cloth, maps, 8vo. London, 1879	Messrs. W. H. Allen and Co.
JEPHSON (H. L.). The Valuation of Property in Ireland. A paper read at the Glasgow Meeting of the British Association, 1876. 14 pp., 8vo.	Dr. W. Neilson Hancock
„ Some Remarks on the desirability of Simultaneous and Identical Legislation for England and Ireland. A paper read at the Dublin Meeting of the British Association, 1878. 15 pp., 8vo.	
KNOX (JOHN JAY). The National Banking System. Address of the Comptroller of the Currency at the Annual Convention of the American Bankers' Association, 1879. 14 pp., 8vo. New York	John Jay Knox, Esq.
MARSHALL (A. and M. P.). The Economics of Industry. xiv and 231 pp., cloth, 12mo. London, 1879.....	Messrs. Macmillan and Co.
MENIER (MONS.). L'Avenir Economique. Tome 2°, partie Economique. 724 pp., 8vo. Paris, 1880	Messrs. Plon and Co., Paris
MORSELLI (PROFESSOR E.). Il Suicidio saggio di Statistica Morale Comparata del. 512 pp., cartograms, 8vo. Milano, 1879	The Author
NEUMANN-SPALLART (F.X.v.) } Die Reichsraths-Wahlen und SCHIMMER (G. A.) } vom Jahre 1879 in Oesterreich. 80 pp., 8vo. Stuttgart, 1880.	F. X. von Neumann Spallart, Esq., D.C.L.
VAN DEN BERG (N. P.). The Silver Question, with introductory chapter on the Currency in Holland and Java. 46 pp., diagrams, 8vo. Liverpool, 1879	N.S. Van Senten, Esq., The Netherlands Consul at Liverpool
WATHERSTON (E. J.). Our Railways: Should they be Private or National Property? 60 pp., 8vo. London, 1879	The Author

Societies, &c.—

Actuaries, Journal of the Institute of. Vol. xxi, part 6, No. 116, July, 1879. 8vo.	The Institute
Arts, Journal of the Society of. Current numbers. 8vo. London	
	The Society

Donations—Contd.

Donations.	By whom Presented.
Societies, &c.—Contd.	
Bankers, Journal of the Institute of. Parts 1—3, June, August, and November, 1879. Plate, 8vo. London	The Institute
British Association, Report of the Forty-ninth Meeting, held at Sheffield, in August, 1879. Cloth, maps, diagrams, &c., 8vo.	
Civil Engineers, Minutes of Proceedings of the Institution of, vol. lviii, Session 1878-79. Part 4. Cloth, plates, and diagrams, 8vo. London	The Association
East India Association, Journal of the. Vol. x, Nos. 1 and 2, 1876-77; and vol. xii, No. 2, 1879, 8vo. London	
Howard Association, Report for 1879. 20 pp., 8vo. London	The Institution
King's College, Calendar for 1879-80. 12mo. London	
Labouring Classes, the Magazine of the Society for Improving the Condition of the, No. 262, October, 1879, 8vo. London	The Association
Lancashire and Cheshire, Transactions of the Historic Society of. 3rd series, vol. vii, Session 1878-79, cloth, maps, plates, &c., 8vo. Liverpool	
Local Taxation Committee, Annual Reports, for 1877, 1878, and 1879. 8vo. London	The Association
Manchester Public Free Libraries, 27th Annual Report of the Council of the City on the, 1878-79. 31 pp., 8vo.	
Manchester Statistical Society. Transactions of the. Session 1878-79. 8vo.	The Association
Mechanical Engineers, Proceedings of the Institution, No. 4, August, 1879. Plates, 8vo. London	
Royal Agricultural Society, Journal of the. 2nd series, vol. xv, part 2, plates, &c. 8vo. London, 1879	The College
Royal Asiatic Society, Journal of the, new series, vol. x, part 2, April, 1878. 8vo. London	
<i>Royal Geographical Society—</i> Proceedings of the, new series, vol. i, Nos. 10 and 11, October and November, 1879. 8vo. London	The Society
Journal of the, vol. xlviii, 1878, cloth, maps, 8vo. London	
<i>Royal Medical and Chirurgical Society—</i> Proceedings of the, vol. viii, No. 8. 8vo.	The Society
Catalogue of the Library, vols. i—iii, cloth, 8vo. 1879	
Medico-Chirurgical Transactions, published by the Royal Med. and Chir. Soc., vol. lxii, cloth, plates, 8vo., 1879	The Society
Royal United Service Institution, Journal of the, vol. xxiii, No. 102. Maps, &c., 8vo. London, 1879	
Social Science Association, Sessional Proceedings of the, vol. ii, No. 1; vol. iii, No. 27; vol. iv, Nos. 10 and 21; vol. vi, No. 11; vol. xi, Nos. 1—10. 8vo. London	The Association
Surveyors, Transactions of the Institution of, vol. xii, parts 2 and 3, 8vo. London	
<i>University College, London—</i> Calendar for Session 1879-80, cloth, 8vo. 1879	The Institution
Catalogue of the Books in the General and in the South Library, with appendix, vol. iii (O—Z). cloth, 8vo.	

INDEX TO VOL. XLII, YEAR 1879.

	PAGE
Agriculture in England and the United States (see <i>Brassey</i>) . . .	751
abstracts of crop returns for 1878 . . .	296-7
<i>Agricultural Returns for 1879</i> [from Mr. R. Giffen's annual Report to the Secretary of the Board of Trade] . . .	790
Increased willingness on the part of farmers to give information in spite of the depression . . .	790
Total quantity of land returned in 1879, variations in areas of different crops, decrease in wheat, and corresponding increase in barley, potatoes, and pasturage . . .	790-93
Increase of orchards; number of live stock, decline of imports of horses, &c. <i>Table</i> of acreage under crops, and each description of crop, and live stock in grazing and in corn counties of England . . .	794-5
Returns of crops and stock in Australia and the United States . . .	796-8
<i>Tables</i> of total area, and acreage of crops and grass, and number of live stock in United Kingdom, 1878-79 . . .	798-9
<i>Table</i> of population of United Kingdom, and value of imports of live stock, corn, and dead meat, and provisions, from 1852 to 1878 . . .	800-807
<i>The Crops of 1879</i> [from the "Times" of 3rd November, 1879] . . .	808
The wheat crop of 1879, the worst on record since 1816 . . .	808
Normal average yield per acre in the different counties, and estimated produce for 1879, if the crop had been an average one . . .	809-11
A deficient harvest, more so than appears, from a greater percentage being required for seed . . .	812-13
Details of many cases in which the crops have proved worthless . . .	813
Estimated wheat production of the United Kingdom . . .	814
Estimated consumption, and home and foreign supply of wheat . . .	815-18
defective, as a cause of famines . . .	80
the causes of the depression in (see <i>Lefevre</i>) . . .	771
AGRICULTURAL DEPRESSION, <i>speeches</i> of Mr. Chaplin and Mr. T. Brassey on moving a royal commission on . . .	784-90
AGRICULTURAL INTEREST, details of distress of, in 1878 . . .	283-4
AGRICULTURAL LOSSES and crisis. See <i>Farmers</i> .	
AGRICULTURAL produce of the United Kingdom, <i>table</i> of quantity and value . . .	535-6
— of 1878, the largest in the history of the United States . . .	751-2
ALICE, Princess, Grand Duchess of Hesse, address of condolence to the Queen on the death of . . .	566-7
AMICI, <i>Essai de Statistique Générale de l'Égypte</i> (notice of) . . .	869
ANALYSIS, on Tabular (see <i>Guy</i>) . . .	644
ASSIZE of bread and ale, and other articles of food since 1203 . . .	100, &c.
reign of Elizabeth, 1595 . . .	119
from reign of Anne to Victoria . . .	122-31
AUSTRALIA. <i>Statistics of Australasian Colonies</i> [from the Registrar- General of New South Wales] . . .	858
Statistical return showing the relative positions and aggregate importance of the Australasian colonies, 1878 . . .	858-9
<i>tables</i> of statistics of . . .	390-91

	PAGE
BANKS, on some effects of a Crisis on the Banking Interest (see <i>Martin</i>)	663
<i>table of yearly transactions of those of England and France compared with accumulation of gold and silver since 1851</i>	412
<i>foreign, table of notes and bullion in, 1873-78</i>	500
<i>The Increase in the Number of Banks and Branches in the Metropolis, the English Counties, Scotland, and Ireland, during Twenty Years 1858-78, with Deductions Relating to the Clearing House Returns, the Increase on the Average Annual Circulation of Bank of England, &c., by William Newmarch [from the "Bankers' Magazine" of October, 1879]</i>	817
Great increase in the branches of banks; the returns taken from the "Banking Almanac," and arranged on the plan adopted by Mr. Dun	817
<i>Tables of metropolitan banks, and their metropolitan and country branches, 1858-78; ditto manufacturing and agricultural regions, and general summaries</i>	819-25
— statements of total resources of banks, and discount houses, 1850-71-74; and clearing house <i>tables</i> 1867-79	837-9
— increase of annual circulation of Bank of England, and total of bank offices in United Kingdom	829-30
Summary <i>tables</i> of banks and their branches, metropolitan and provincial, 1858-78	831-3
Territorial <i>tables</i> of the metropolitan and provincial districts	835-44
BANK OF ENGLAND—	
weekly return of the issue and banking departments for the year 1878	364-5
variations in its liabilities and public deposits up to 1st January, 1879	667-8
BANKS, LONDON, clearing house, and amounts of promissory notes in circulation (in England and Wales, Scotland, and Ireland):	
for the year 1878	367
clearing house returns, 1878	294
<i>Bankers' Clearing House Returns</i>	504
<i>Table of annual totals passed on fourth of month, Stock Exchange account days, and consols settling days, and on other days, 1867-79</i>	504-5
BANKS (JOINT STOCK). <i>Tables of depreciation in value of shares, 1878</i>	672-6
— value of bank shares in relation to the panics of 1866 and 1878	676-80
— fall in price of shares, 1878	501
— London and other, and Bank of England, <i>tables</i> of their balance sheets	690-97
— London, <i>table</i> of their profit and loss account, 1878	669
— London, decrease of deposits in, in 1878, 10 $\frac{3}{4}$ millions	666-7
— City of Glasgow, effect of the catastrophe in causing greater fall in prices	44
— details of the frauds of, &c.	277-9
BANK LIABILITY, effects of limited or unlimited, consequence of exempting trustees from liability, and scheme for regulating ditto	687-8
<i>With what Margin of Uncalled Capital may the Leading Unlimited Banks safely become Limited?</i> [Letter to the "Statist" by John Dun]	844
Difficulties attending the change from unlimited to limited liability	844
Rate of loss to business risks ascertained in the five recent large bank failures	845
Calculation of uncalled margin of capital to be maintained by the five leading unlimited banks if they become limited	847
Advantages of their becoming limited	848
BANK NOTES, origin of, in the deposit note of the seventeenth century	681-2
BERG (N. P. van den). The Silver Question (analytical notice of)	863
BEVAN (G. Phillips). <i>Remarks on the labour question in connection with our colonies</i>	399
BOAT RACES. <i>University Boat Races and Sun-Spot Cycles</i>	328-9

BOOKS.	PAGE
<i>English Literature in 1878</i>	325
Extracts from the "Publishers' Circular," with analytical <i>table</i> of books published in 1878, and comparison with 1877, showing increase of 220	325-8
<i>Notes on Economical and Statistical Works</i>	331
Hansen's "Denmark's Statistik," vol. iii [means of conveyance, post office, financial history and trade maps]	331
Madsen's "Mathematical Laws of the Traffic of Denmark, Sweden, and Norway with the rest of the World," 1871-77	332
Japan Postmaster-General's seventh report, 1878	332
Cognetti de Martiis, "Latin Monetary Union"	333
Feer-Herzog, "Report on the Monetary Conference of Paris," August, 1878. Mannequin, "Le Problème Monétaire, et la Distribution de la Richesse," 1879	333
Hildebrandt's "Science Index," 1879	334
<i>Notes on Economical and Statistical Works</i>	539
W. W. Hunter's "Report on the Statistical Survey and Imperial Gazetteer of India, 1878"	539
A. Soetbeer's "Edelmetall-Produktion und Werthverhältniss zwischen Gold und Silber"	542
<i>Notes on Economical and Statistical Works</i>	727
H. H. Gossen, "Entwicklung der Gesetze des menschlichen Verkehrs und der daraus fließenden Regeln für menschlichen Handel," 1854 [Development of the Laws of Human Commerce]	727-32
A. Vessélovsky, "Annuaire des Finances Russes," 1879	733
"Essai de Statistique Générale de l'Egypte," 1873-77	734
Appendix to "Report from Select Committee on Wine Duties"	735
"European and United States' Tariffs, &c.," 1840-78	736
see <i>Library</i> of the Society.	
BOTLY (—). <i>Remarks</i> in discussion (Martin, Effects of a Crisis on Banks)	702
BOURNE (Stephen). <i>On Some Phases of the Silver Question</i>	406
Connection of gold with silver; depreciation of the latter 25½ per cent. since 1857, or 18 per cent. since 1871; difficulty in knowing whether an apparent increase in value of gold be due to a decrease of value in other articles, &c.	407-8
Relation of production and quantity of precious metals to state of trade	408-11
— amount of gold in existence in 1849, 560 millions, and production of gold since 1849, 573½ millions, and of silver 241½ millions	408-9
— <i>table</i> showing estimated production of gold and silver in each year from 1849 to 1877, with imports and exports of bullion, coin, and merchandise since 1860	409-10
Sufficiency of gold supply; <i>table</i> showing percentage annual increase of gold and merchandise on existing amount of gold, and its sufficiency for international exchanges	411
— <i>table</i> of yearly transactions of London Clearing House and Bank of England and France compared with estimated accumulations of gold and silver since 1851	412
— every ounce of gold does much more duty now, from the time of transmission of bullion and of the realisation of the value of goods after dispatch to other countries being halved by steam, telegraph, &c., and the excessive use of cheques	413
Fall in prices; reference to Mr. Giffen's, Mr. Jevons's, and the "Economist" systems of index-numbers, and <i>table</i> of ditto, 1847-79	413-15
— <i>table</i> of index-numbers for prices of articles in the country of production, and comparison with home prices	416
Purchasing power of gold; the influence of gold in raising or reducing prices dependent on the circumstances of its production and facilities for employment, and the recent fall in prices more due to the condition of manufacturers and buyers than to the appreciation of gold	417-19
Variations in the value of gold: the permanent and temporary values as shown in stationary (public funds) or fluctuating (bank rate) investments	419
— <i>table</i> of yearly price of Government stocks, and bank rates in England, France, and Germany	420
— the price of gold lying absolutely secure in Government stocks at a fixed value of 3 per cent., shown to vary so much that it cannot be used as having a fixed value in relation to silver or other commodities	421
Production and depreciation of silver; average rate of increase since 1849, 8 millions, with <i>table</i> of production on each year and price in London market, imports, exports and bills on Indian Government	422
— no regular effect on price from increased production nor from absorption by the East	423

BOURNE (Stephen). *On some Phases of the Silver Question—contd.*

Production and depreciation of silver; causes to which the fall is due in the opinion of the House of Commons Committee: increased yield of Nevada mines, introduction of gold currency in Germany, Scandinavia, the Latin Union, and Holland, and decreased demand for India	423-4
— other important causes: the ceasing of money-hoarding from banking facilities; banking accounts kept by petty tradesmen; the greater convenience of the superior metal (gold) reducing silver to the condition of a commodity.	425
Depression of trade: coincidence of the decay in the value of silver with its earlier stages, and the decrease in our exports	425
— direct effects of the silver depreciation less than the indirect, on our trade, from our standard being a gold one	426
— losses in transmission of Government payments from India to England last year 13 per cent. (2 millions)	427
— the loss on the depreciation of the Indian rupee, balanced by the surplus exports, the labour and produce in them having obtained more rupees	427-8
— fallacy of supposing that the decline in our exports, fall of prices, and depression of trade, are all due to the altered relation in the value of gold and silver	428
Bi-metallic and other theories: the two principal, the bi-metallic and the gold standards, and difficulties connected with the former, in the bulk, and accumulation of silver, and the expenditure and loss on coinage	428-30
— difficulties of Mr. Seyd, Colonel Smith and Mr. Hendrik's proposals with regard to India, for preserving the value of the rupee	430-31
— benefits of each country having but a single standard, but evils of all changing to gold, in the complete demonetisation of silver	431
— the present derangements of mercantile affairs will cure themselves without forced remedies likely to create a worse disease	432
Concluding remarks: recapitulation of the phases of the question	432-3
Postscript: illustrations of the meaning of the value of the pound and explanation of the apparent disparity of results in calculations between 1873 and 1877, and 1872 and 1878	433-5
Tables of production of gold and silver, 1852-78	436
— of imports and exports of corn and bullion and merchandise in each country, 1860-77	437-8
— of principal imports and exports of the United Kingdom, 1872 and 1878	439-43

Discussion on Mr. Bourne's Paper:

Giffen (Robert)

Objections to Mr. Bourne's opinion on the meaning of a "pound sterling;" difference between "increased value of gold, and diminished value of commodities," "amount of gold production," and "non-relation of a smaller or larger stock of gold with the fall of prices;" doubts as to requirements for gold having much diminished; the depression of trade caused by such operations as those of Collic and Co., and Hough, Balfour and Co., and by bank financing	444-6
--	-------

Jevons (Stanley)

Mr. Bourne's opinion that the "fall of prices is not due to the scarcity of gold," considered; the continual downward tendency in the value of silver to gold since the time of the Greeks and Romans; the bi-metallic system likely to become obsolete in France; the Indian currency best left to right itself	446-7
--	-------

Langley (—)

Movement in Liverpool and Manchester for an inquiry into a bi-metallic currency	447
---	-----

Levi (Leone)

Objection to a bi-metallic currency; the single standard the sole method of minimising the inconveniences of comparing the values of commodities	447-8
--	-------

Cohen (L. L.)

Doubtful good of making changes in the currency, and confusion in India likely to arise from fresh legislation; great discrepancy between Mr. Bourne's and Mr. McCulloch's estimate of the consumption of the precious metals by wear and tear, and in arts and manufactures, 2 millions, and 19 millions [not 20 millions, 10 being for coinage]; a "pound sterling," though a fixed standard, yet a variable quantity as to its purchasing power; uncertain amount of the quantity of silver yet kept in store by the German Government, and desirability of its exact value being known	448-9
--	-------

Coles (John)

Difficulty in arriving at the exact amount of silver imported into India	450
--	-----

Lefevre (G. J. Shaw)

Differed from Mr. Bourne as to placing the causes of the depreciation of silver in excess of imports, or depression of trade, and as to varying price of gold	
---	--

BOURNE (Stephen). *Discussion on his Paper—contd.*

Lefevre (G. J. Shaw)—*contd.*

affecting the price of Government stocks; doubtful character of an appreciation of gold in recent years, as causing a fall in prices; the depreciation of silver contemporaneous with its increased production in 1872, followed by its demonetisation in Germany, &c., and its probable cure by a falling off in production; plans like bi-metallism for that purpose very objectionable, and a temporary annual loss by India on the transmission of payments to this country a lesser evil

450-52

Murray (J. C.)

The original currency of India a gold one; proposal that it should be again introduced, with notes and silver to pay trade balance due to England, &c.

453

Bourne (Stephen), reply in discussion:

The value of the pound sterling more fixed than gold itself; property like consols, though equally valuable at all times in producing the same interest, variable in price; his paper a reply in some measure to Mr. Giffen's on the Fall of Prices; reference to discrepancies between his and Sir H. Hay's figures for the last three years; present accumulation of gold from a lessening of transactions requiring its use; amount of wear and tear of silver, &c.

454

BOURNE (Stephen). *Remarks in discussion (Giffen on Fall of Prices)*

71

ditto (Hanwick on Compulsory Education in Ireland)

474

BOWDITCH's system of collection of facts on cards (notice of)

656

BRASSEY (Thomas). *Inaugural Address as President of the Statistical Society, November, 1879, "Agriculture in England and the United States"*

751

Difficulties of the landed interest from adverse seasons and American competition

751

The information given, extracted from annual report of Mr. C. Worthington, of the Department of Agriculture, Washington

751

The production of 1878 the largest in the history of the United States

751

Table of the acreage; product and value of principal crops of 1878 in the States

752

Great decline in prices there of wheat and maize since 1864, from increased production and appreciations in currency

752-3

Yield per acre, 12·2 bushels in United States, compared with 29½ bushels in the United Kingdom

753

Notice of the production of other crops, tobacco, and cotton, number of live stock, &c.

754-5

Freights and railway charges, probable gradual increase of, as the eastern seaboard land is thrown out of cultivation, and production diminishes in competition with the far west

755-7

Fluctuation in our importations of horned cattle, sheep, and preserved provisions, showing large increase

757-8

The fertility of the soil under English farming due to the large number of sheep maintained

758

High rates of agricultural wages in the States, as well as of rents, clothing, &c.

759

Large farms increasing in the States, and their average size the same as in England

760

The area of our farms determined by long experience, and our practical correction of obsolete laws by their disuse

760

Prospects of a large displacement of arable by pasture land

761

Statement on the increased acreage of potatoes and of fruit land, and large value of the returns per acre (from a pamphlet by Mr. Whitehead, of Barming)

762

The progress of exhaustion of land on the western seaboard of America, and cost of transport, likely soon to allow the British farmer his legitimate profits

763

The future full of hope in the power of compensating changes

764

BRASSEY (T.). *Speech in Parliament on Mr. Chaplin's motion for a royal commission on agricultural depression*

786

Foreign Work and English Wages, with reference to the Depression of Trade (analytical notice of)

865

BREAD. See *Assize* of.

BRETT (Thomas). *Remarks in discussion (Hancock on Compulsory Education in Ireland)*

475

BRIDGEWATER (—). *Remarks on the want of moisture on the soil of Victoria*

403

BRITISH ASSOCIATION. Section F, Economic Science and Statistics, Address of the President of the Forty-Ninth Meeting held at Sheffield, August, 1879 (see *Lefevre, Shaw*)

771

	PAGE
BROWN (Harold). <i>Remarks</i> in discussion (Martin, Effects of a Crisis on Banking)	704
BULLION AND SPECIE, gold and silver imported and exported : January—December, 1876-78	361
CAIRD (James). <i>Tables</i> of agricultural produce, foreign food, importations, value of land, &c. (see <i>Commerce</i>)	482-8
<i>remarks</i> on the possibility of still further powers of cultivation in America, and reduction of transport, rendering the position of the British farmer one of great difficulty and apprehension	769
CANALS, commencement of, by the Duke of Bridgewater, in 1759	90
CATTLE, statistics of the importation of, from America	788-89
see <i>Prices</i> .	
CELTIC LANGUAGES in the British Isles, statistics of (see <i>Ravenstein</i>)	579
<i>tables</i> in districts of the Irish speaking population, Gaelic in Scotland, and Welsh, in 1851 and 1871	624-36
CHAPLIN (Henry). <i>Speech</i> in Parliament on his motion for a royal commission on agricultural depression	784
CHEESE, statistics of the production, importation, and prices of, in 1876	789
CHUBB (Hammond). <i>Remarks</i> on the banking crises of 1866 and 1878	703
COAL, production and exports, and prices of, 1845-79	498-9
COAL TRADE, unhealthy activity in, 1878	282
COGNETTI'S Latin monetary union (notice)	333
COHEN (Lionel L.). <i>Remarks</i> in discussion (Hayter on Victoria)	394-5
<i>ditto</i> (Bourne on the silver question)	448
COINS, notices of depreciation of, in France, Spain, and Scotland	{ 165
— the "aureus" defrauding by Heliogabalus increasing the weight of gold in	{ (note) 166
— from clipping, filing and sweating of, in thirteenth to fifteenth centuries	{ (note) 169
Coin. See <i>Gold, Silver</i> .	
COLES (John). <i>Remarks</i> in discussion (Hayter on Victoria)	392
<i>Remarks</i> on the amount of silver importation into India	450
"COLONIAL OFFICE LIST for 1879" (notice)	546
COMMERCE. <i>Financial and Commercial History</i> of 1878 [from the "Statist"]	276
General summary of the disasters, political, financial, and commercial of the year, the harvest prospects more favourable	276-7
The bank failures : details of the frauds carried on by the City of Glasgow Bank, and of the stoppage of the Caledonian and West of England Banks	277-9
A crisis otherwise probable at the time, as shown by the enormous number of bankruptcies (15,059)	280
Cotton crisis : gradual over production in raw material and manufactures following the scarcity caused in the Southern States by the American war	280
— over exportation to India, depression of silver, and the famine there, and other causes ; reduction of wages, strikes, &c.	281
Coal and iron trades : unhealthy activity in, and over construction of railways, 1868-73, followed by depreciation, added to by the change taking place through the cheap manufacture and increased use of steel	282
Agricultural interest : the losses of three previous bad harvests unable to be made up owing to excessive importations from America ; difficulty in letting farms, lowering of rents, and reduction of wages, contribution of the agricultural distress to badness of trade, and necessity for a general lowering of prices and readjustment of expenses to returns	283-4
Miscellaneous trades : the prospects satisfactory in shipbuilding, railways, banks, &c., and capital expenditure likely to prove remunerative	284
Character of the year's trade : distress in a few great industries, and stationariness only in the rest ; reductions in wages ; investments and savings still effected ; no evidence of loss of capital from excess of imports, &c.	285-6
New fall in silver : partly caused by the proposal of the American Government, and partly by fear that Germany had withheld silver coin, and might flood the market at any time	286

	PAGE
COMMERCE. <i>Financial and Commercial History of 1878—contd.</i>	
New fall in silver: no permanent contraction of the silver area, and decline of production in the United States	287
Resumption in the United States: Mr. McCulloch's judicious contractions, their stoppage till the Resumption Act of 1873, which was finally carried out in 1877-78, with little trouble, when the premium on gold disappeared	288-9
The protectionist revival among the continental nations, and imposition of hostile tariffs	289-90
Money and trade in 1878: the two principal events—the Berlin Treaty and the City of Glasgow Bank failure	290-91
— scarcity of gold from the United States' accumulation towards resumption of specie payments, and its effects in draining our bank reserve, &c.	292-3
— London Banker's Clearing House returns (increase July—September, and decrease October—December)	294
The crops: the harvest of 1878, though considered abundant, really only a bare average one	295
— abstracts of grain and of root, hay, and potato crop, returns for 1878	296-7
— French table of wheat crops of principal countries in and out of Europe	297
Foreign trade: values of imports and exports in each month 1877-78; imports of food and exports of cotton piece goods to the East	298-300
Summary of Board of Trade returns for December, and for years 1877-78	301-3
American economy in 1878; large number of failures, but more satisfactory condition of trade than in any year since 1873	303-4
COMMERCE. <i>General Results of the Commercial and Financial History of 1878</i> [from the "Economist"]	480
Commercial and financial distress of 1878 much greater than in 1877; further decline of prices, defeated strikes, and distress in agricultural and iron and coal industries	480-81
Gazette average price of wheat after harvest, and calendar year average, 1872-78, &c.	481
Mr. James Caird's table of produce in bushels per acre in the harvests of 1849-78, showing badness of harvests since 1869	482
— table of annual growth and importation of agricultural produce, showing a total value of 371 millions	483
— table of increase in annual value of land 1857-75, showing the prosperity of the landed interest, especially in Scotland	484
— recent rapid increase in foreign food supplies, table of prices of meat and of importations into the United Kingdom	485-6
— gradual decrease of number of cattle since 1874	486-7
— table of comparison of produce of wheat, rent, prices and wages in 1770, 1850, and 1878	487
— summary of eight causes of the commercial distress	488
Table showing decrease of exports in foreign countries	488
Foreign loans issued in London, 1860-74; table showing loss of 223 millions in total and partial default	489
Signs of commercial revival in the United States	490
Gold and silver: tables of annual production, 1842-77; metallic reserve of the great banks, 1850-78; and shipments of silver to the East, 1866-78	490-92
Cotton: general depression of trade in 1878, and insufficient supply; tables of average prices, 1876-78; of consumption in the world; value of cotton manufactures in Great Britain; exports, &c.	492-6
Wool: prices; table of values in 1873-78	496-7
Coal and iron: the condition of the iron trade for 1878 depressing beyond all precedent; tables of production of pig iron, 1867-73, and 1850-77; products and exports of coal, and prices, London market, 1845-79	497-9
Banks: leading foreign banks; table of notes and bullion, 1873-78, and London and Scotch joint stock banks; fall in price of shares, 1878, and lessened market value	500-501
Wholesale prices in London; tables at four dates, 1867-78, compared by January, 1879	502-3
COMMERCE. "Liverpool Chamber of Commerce Report" (notice)	544
COMMODITIES. See <i>Prices of</i> .	
CONGRESSES. See <i>Statistical, Demography, Prison</i> .	
CORN—	
average weekly prices (with monthly and quarterly averages), 1878	362-3
CORN. <i>The Gazette Average Prices of Corn</i> . [Memorandum of the Comptroller of Corn Returns (R. Giffen) on the Diminution in the quantities of Wheat sold in the Markets of England and Wales, &c.]	709
Great reduction in the amount of returns since 1865, and doubts as to efficiency of the collection from that cause, from change of inspectors, &c.	709-10
The reduction concurrent with the reduction of the acreage under wheat (10 per cent.) and of yield (37 per cent.) since 1869	710-11

	PAGE
CORN. <i>The Gazette Average Prices of Corn—contd.</i>	
The change from 290 to 150 towns ascertained to have had no different results as a basis for tithe averages	711-12
Extracts from the Corn Acts 5 Victoria, relative to returns of sales and resales	712-14
The returns of sales by weight instead of by measure, and confusion of customary with imperial measures, shown to have no appreciable effect in varying price	715-19
Summary of conclusions	719-20
Appendix: analysis of summary of special return of wheat, barley, and oats, sold in market	720-24
<i>table of legislative restrictions on the export and import of, 1823-1869</i>	133
<i>see Grain.</i>	
COTTON, depression of trade in; <i>tables of average prices, 1876-78, &c.</i>	492-6
COTTON CRISIS, over production, over exportation to India, &c., 1878	280-81
COURTNEY (L. H.). <i>Remarks in discussion (Giffen on Fall of Prices)</i>	73
CRAIGIE (Capt. P. G.). <i>Remarks in discussion (Giffen on Fall of Prices)</i>	75
CRISES of 1866 and of 1878, <i>tables of their effect on bank-note circulation</i>	698-700
<i>see Banks.</i>	
CROPS. <i>See Agriculture.</i>	
CROWS, ROOKS, &c., Act 24 Henry VIII, for destroying, on account of their consumption of corn	214
CURRENCY, notices of times of defacement and depreciation of	163-6
DANVERS (F. C.). <i>Remarks in discussion (Walford on Famines)</i>	269
DEATH-RATE. A suggested coincidence between the death-rate and the motions of the planet Jupiter [by B. G. Jenkins]	330
List of annual rate of mortality per 1,000, and chart giving mortality in England since 1838, and the orbit of Jupiter during the same period	331
DEATHS. <i>See Mortality, Registration.</i>	
DEBTS (National), proportion of those of various countries to their revenues	373
DELOCHE. Form for international statistics	17
DEMOGRAPHY and Medical Geography, International Congress of first session (<i>see Mouat</i>)	23
DOXSEY (Rev. I.). <i>Remarks in discussion (Walford on Famines)</i>	268
— <i>ditto</i> (Hayter on Victoria)	395
DUN (JOHN). <i>Letter to the "Statist"</i>	844
<i>see Banks (Letter to "Statist").</i>	
EDUCATION (COMPULSORY), the feasibility of, in Ireland (<i>see Hancock</i>)	456
— legislation relative to, in England and Scotland since 1870	456-7
EGYPT, statistique générale de l'Égypte (notice of)	734
ELLIS (A.). <i>Tables of relative cost of food and materials, 1859-78</i>	41
ERRINGTON (G.). <i>Remarks on the religious difficulty in compulsory education in Ireland</i>	476
EXCHANGES (Foreign), quotations on London, &c.:	
for year 1878	368
the appointment of King's exchangers at the ports	{ 178
<i>(note)</i>	
EXPORTS, United Kingdom, 1874-78	359
<i>see Imports.</i>	
<i>tables of, with average prices in 1873 and 1877</i>	66-8
<i>see Prices of.</i>	
FAMINES of the World, past and present, Part II (<i>see C. Walford</i>)	79
on the mortality occasioned by	222

	PAGE
FAMINES— <i>contd.</i>	
on the prevention of, in the future	220-22
<i>table of the literature of, 1496-1878</i>	246-65
FARMERS. <i>Farmers' and Landowners' Losses</i> [from the "Statist," June, 1879]	535
Reference to Lord Derby's consolatory speech to the Farmers' Association, but unexampled severity of the crisis through which farming is passing nevertheless	535
Statistics showing the enormous losses of both farmer as to net profits, and the landowner as to rental	535-7
Gross agricultural produce of the United Kingdom, <i>table of quantity and value, the latter 260$\frac{3}{4}$ millions, of which rental and farmer's profits are each a quarter, or 70 millions</i>	535-6
Calculation of the losses sustained by farmers on the different items of produce, showing a total equal to the whole sum reckoned for income tax as the aggregate farmer's profit	536-8
The rise in agricultural wages just previous to the commencement of bad seasons, and increased foreign competition	538
The losses equal to 8 per cent. on the farmer's capital	538
The coincidence of low prices with unfavourable seasons from the force of foreign competition likely to prevent any return to the old prosperity	538
FARMS, large, increasing in the States, and their average size the same as in England	760
"FEER-HERZOG on the Monetary Conference of Paris, 1878" (notice)	333
FINANCIAL HISTORY. See <i>Commerce</i> .	
FIRES. <i>The Fires of London during the Year 1878, and the Metropolitan Fire Brigade</i> [from Captain Shaw's Annual Report for 1878]	322
Number of fires, persons endangered, and lives lost, strength of the brigade, classification of fires according to trades, according to causes, and with reference to days of the week	322-5
FISH, statutes for governing the sale of, 1276, and since	102, &c.
FOOD, price of, imperial and municipal restrictions on, 1203-1846	100
see <i>Prices</i> .	
FORDHAM (E. K.). <i>Remarks in discussion</i> (Giffen on the Fall of Prices)	69
FORESTALLING, extracts from statutes on, 1266-1844	199
FOVILLE (A de). See <i>Trade</i> (<i>Foreign</i>) of France.	
FRANCE. See <i>Population, Trade</i> .	
GÆLIC, <i>table of Gaelic speaking Celts in the British Islands</i>	622-3
see <i>Celtic Languages</i> .	
GIFFEN (Robert). <i>On the Fall of Prices of Commodities in Recent Years</i>	36
Serious and probably permanent character of the fall in prices	36
Extent of the fall; instances of its continuous gradual decline from 1873 to 1878; in iron, 66 per cent.; in tin, 57 per cent.; in cotton, 46 per cent.; in wool, 43 per cent.; and in wheat, 29 per cent.	37
— <i>table showing heaviness of fall, by comparing January, 1873, with January, 1879</i>	38
— <i>table of index numbers, showing comparative rises and falls from 1845 to 1879</i>	39
— the index number of January, 1879, shows the lowest level of prices since 1850	40
— Mr. A. Ellis's <i>table showing relative cost of foods and materials in 1859-78, and relative fall since 1869</i>	41
— changes of prices in exports 1865-77, compared with 1861, showing them to be at a much lower level in 1878 than after the depression of 1865	42
— summary of previous remarks as to the excessive fall in prices 1873-79, as compared with previous fall following 1865	42-3
Causes of the fall; general statement of them, and of such as may account for the prolongation of the decline	43-4
— the commercial revelations of the last few years more gradual and more discreditable than those of 1866; the collapse of foreign loans, and catastrophe of the City of Glasgow Bank, as accounting for the greater fall in prices than in 1866	44-5
— the deficient harvests "one-fourth" of 1875-76-77; explanation of their bad effects, though not causing rise of prices, owing to foreign importations	46

	PAGE
GIFFEN (Robert). <i>On the Fall of Prices of Commodities—contd.</i>	
Causes of the fall : contemporary reduction also in stocks of cattle and sheep	47
— injurious effects of the bad harvests on the country banks	48
— unfavourable foreign exchanges	48
— extraordinary demands for gold in Germany and the United States, combining with a probable actual falling off in the supply	49-50
— <i>table</i> of gold production, 1852-73, showing gradual reduction	50-51
— the effects of this gradual falling off of gold production intensified by an enormous contemporary increase in population, in wealth per head (equal to 100 per cent.), and in the enlarged production of coal, iron, cotton, ships, &c.	51-4
— the additional effect from the inclusion of France, Germany, and the United States among gold-standard using countries	53
What the fall explains, and its consequences; the supposed decline in the amount of our foreign trade explainable by a fall in prices equivalent to the amount	54-6
— question as to the connection of the depreciation of silver, with the prolonged discredit of trade.	56-7
— necessity of a fall in wages following a great fall in prices	57
— probability of a prolonged fall in prices following an incipient gold scarcity, as a gradual rise followed the Australian and Californian discoveries	58-9
Concluding observations; necessity for economising expedients even by the issue of one-pound notes to mitigate the evils of a scarcity of gold	59-60
<i>Tables</i> of prices of leading wholesale commodities, 1873-79	61
— of wholesale prices 1845-77, proportionate results	62
— of prices of food and raw materials, and of their aggregate prices, 1859-78	63-4
— of estimated production of gold, 1852-75	65
— quantity and value of exports, with average prices in 1873 and 1877	66-8
<i>Discussion on Mr. Giffen's Paper :</i>	
Fordham (E. K.)	
Favourable circumstances productive of low prices, and likelihood of their continuance, and of the greater purchasing power of wages	69
Jevons (Stanley)	
Temporary character of the demand for gold in Germany and America; great advance of cheque and clearance systems in Australia and America; temporary character of the present depression; serious effects of the deficiency of solar heat in causing bad harvests, &c.	70-71
Bourne (Stephen)	
Temporary character of the present depression, but probability of prices going lower still; the deficiency of a bad harvest only half the amount on our entire consumption; differed from Mr. Giffen in considering there was too little gold for the use of the world; instances given showing that gold was less wanted now proportionately than formerly; the falling off in our export trade 42 per cent., one-fourth due to diminished quantity, and three-fourths to diminished prices; our national prosperity would be connected with the recovery of our export trade	71-3
Courtney (L. H., M.P.)	
The phenomenon of a fall in prices of too frequent a recurrence to be attributed specially to scarcity of gold; a fall in prices due to facility of production, a real benefit to the country; a rise in prices from gold discoveries also a benefit; but a fall of prices alone, from difficulty in finding it, as distinct an evil; the fall of prices undoubtedly owing to the great commercial crisis in America in 1873	73-4
Walford (Cornelius)	
The benefits of the free trade policy in keeping down the price of the necessities of life during the commercial depression	74
Craigie (Capt. P. G.)	
Attributed the present state of depression chiefly to the injury to the largest interest in the country from the successive bad harvests of late years, and gradual reduction in its live stock	75
Hall (E. Hepple)	
Agreed with Mr. Courtney in attributing our troubles to the manias in America in 1873, and our foreign speculation and investments; evils of an inflated currency in inflation of prices	75
Lefevre (George John Shaw), <i>President</i>	
Agreed with Mr. Giffen in his statement (from which Mr. Bourne did not really differ), that the decrease in prices nearly accounted for the apparent reduction in our exportations since 1873; question of a permanent reduction in prices from a further appreciation of gold	76-7

	PAGE
GIFFEN (Robert). <i>Discussion on his Paper—contd.</i>	
Giffen (Robert), reply:	
The principal point he considered to be that if the diminishing supply of gold of the last twenty years continued, with the wants of the world continually increasing, a further great fall of prices must take place	78
GIFFEN (Robert). <i>Remarks in discussion</i> (Mouat, International Congresses)	33
<i>ditto</i> (Hayter on Victoria)	400-401
<i>ditto</i> (Bourne on the Silver Question)	444
see <i>Agricultural Returns</i> for 1879.	
see <i>Corn</i> (Gazette average prices).	
see <i>Prices of Exports</i> (1861-77).	
see <i>Statistics</i> (Miscellaneous) report to Board of Trade.	
GOLD, amount in existence, 1849, production since, &c.	408-9
<i>table</i> showing estimated production of, in each year since 1849	409-10
<i>tables</i> of annual production, 1842-77	490
<i>tables</i> of estimated production of, 1852-75	65
<i>tables</i> of production of, 1852-78	436
<i>table</i> of production, 1852-75, showing gradual reduction	50-51
<i>table</i> showing percentage and annual increase of, compared with merchandise	411
extraordinary demand for, in Germany and the United States	49-50
question of its purchasing power, and influence in raising or reducing prices	417-19
variation in its value, as shown by the prices of stationary and fluctuating investments	419-21
GOSLIN (S. B.) <i>Remarks in discussion</i> (Walford on Famines)	274
GOSSEN, on the laws of human commerce (notice of)	727
GRAIN, misapplication of, in distilling, malting, &c., <i>tables</i> of, with notice of Acts for restricting	212-17
GUERRY'S "Analytical Tables" (notice of)	656
GUY (William A.). <i>On Tabular Analysis</i>	644
Reference to a preceding paper by the author on the subject in 1860, entitled "Statistical Methods and Signs"	644
Dr. Tweedy John Todd's "Book of Analysis," published in 1831. This paper an analysis of its plans, with suggested improvements	644-52
Reason for its not yet having been applied to any definite inquiry	644-5
Its method, one of tabulation, by which words and short descriptive sentences are converted into signs, as, for instance, large letters for symptoms of a disease present, small letters their noted absence, and figures as marks of their intensity	645-6
Character of a statistic's units, either simple or of variable magnitude, as developed into mortality returns and other statistics	647
The tabular form stimulatory of an invention of symbols and signs	648
Dr. Todd's plan framed on the assumption that the circumstances of the proposed inquiry are unknown	648
Illustration of the benefits of the system, as shown in the author's plan of inquiry into the poisonous effects of emerald-green in 1862	649
Tests of the method in statements of witnesses in law courts and in cases of poisoning by arsenic or strychnine; histories of symptoms of cases, &c., discovering the laws of disease and mortality	649-52
Appendix of <i>tables</i>	653-5
<i>Discussion on Dr. Guy's Paper:</i>	
Heywood (—)	
Notice of M. Guerry's valuable analytical tables	656
Walford (Cornelius)	
Todd's system most useful in physical occurrences, as illustrated by Dr. Haviland's tables, and some charts of his own, but tabular analysis chiefly useful in training the mind to method in conducting inquiries	656-7
JEVONS (Stanley)	
References to Mayr's work on methods of statistical inquiry, and to the curvilinear or graphic method as supplementary to the tabular	657
LEFEVRE (John G. Shaw)	
Notice of Dr. Bowditch's system of collection and abstraction of facts on cards instead of by tables, as much facilitating analysis	658

	PAGE
GUY (William A.). <i>Discussion on his Paper—contd.</i>	
Other remarks on the card system by F. G. P. Neilson, H. G. Bowen, W. Hooper, T. G. Balfour, H. M. Paul, and W. S. Jevons	659-60
Paul (H. M.)	
Various uses of tabular analysis in variation of prices, horizontal and vertical additions, &c.	659-60
Guy (Dr.), reply :	
He considered there were three kinds of tabular forms, (1) tables of record, (2) tables of illustration, and (3) tables of analysis ; Government periodical returns were the first, M. Guerry's, Professor Mayr's, and Dr. Haviland's the second, and Dr. Todd's the third form ; Dr. Todd's table, an abstract form, but could be applied as one of elimination to chemical tests ; or in such cases as that of diarrhoea at Millbank Prison, which showed increased temperature and diarrhoea as cause and effect ; question of comparative steadiness of physical events and those brought about by human will	660-62
GUY (W. A.). <i>Remarks at the anniversary meeting relative to im-</i> <i>proved accommodation for the Society</i>	576
<i>ditto on the state of the prospects of obtaining Government land</i> <i>for building a house for the Societies</i>	765-7
HALL (E. Hepple). <i>Remarks in discussion (Giffen on Fall of Prices)</i>	75
<i>ditto (Walford on Famines)</i>	269
HANCOCK (W. Neilson). <i>The Feasibility of Compulsory Education</i> <i>in Ireland</i>	456
Legislation as to compulsory education in England and Scotland since 1870 ; Mr. Forster's Elementary Education Act, the Scotch Education Act, 1872, Agricultural Children Act, 1873, and Lord Sandon's Act of 1876	456-7
Feasibility of extending these English and Scotch compulsory education systems of 1870-78 to Ireland, in the same way as previous factory and industrial school legislation has been	458-9
Statistics showing the non-attendance at school in Ireland in 1871 to have been 54 per cent., as compared with 39 per cent. in England, and 30 per cent. in Scotland, and other more recent statistics as to national schools, prisoners, &c., showing the necessity for compulsory education now in Ireland as much as in England in 1870	459-61
The modification of the English Acts of 1870-76, which are necessary in extending them to Ireland (owing to clergymen in Ireland being excluded from being guardians)	461-2
Existing facilities for the adoption of the system of compulsory education in Ireland (its being studded with school-houses, and having a large and efficient staff of schoolmasters)	462
— <i>tables of school attendance in Ireland, 1871, showing probable effect of</i> <i>compulsion in increasing it from 36 to 72 per cent.</i>	463
— cheapness which would attend prosecutions for non-attendance, and the collection of school attendance statistics	464
General results to be expected from the constitution of school attendance committees, with a view to compulsory education	465
Comparison of the application in England and Scotland of general taxes and rates to board and denominational schools with that in Ireland	466-7
Imperial nature of the question of compulsory education in Ireland	468
— Irish education of great moment to England and Scotland, as shown by the large proportion of persons of Irish birth in Great Britain	468-70
Summary of conclusions	471
<i>Discussion on Dr. W. Neilson Hancock's Paper :</i>	
Stansfeld (Right Hon. James)	
Difficulty in applying compulsion in Ireland, where the difference between Protestants and Roman Catholics was so much greater than between the Church and Dissenting bodies in England	472-3
Jevons (Professor)	
Dr. Hancock's arguments for the extension of the English education laws to Ireland apparently conclusive, independent of his argument that it would be of benefit to ourselves	473-4
Bourne (Stephen)	
Thought that in the Statistical Society the subject would be looked at merely from a numerical point of view. He feared that the religious difficulty had been got rid of in England by the neglect of moral and religious training, and this would not increase the happiness nor the glory of our country	474

	PAGE
HANCOCK (W. Neilson). <i>Discussion on his Paper—contd.</i>	
Brett (Thomas)	
Did not agree with Dr. Hancock's arguments for placing the highest dignitaries on the school boards, though he objected to the statutable disability of the clergy	475
Lefevre (G. J. Shaw)	
Complimented Dr. Hancock on his valuable contributions to political economy, and for the assistance he had rendered to those interested in Irish questions; he was not aware that Irish education was so behind-hand, and agreed with the author that it was desirable to carry out the English system in Ireland	475-6
Errington (G.)	
Enormous religious difficulties and jealousies which would attend the introduction of compulsory education in Ireland	476
Willans (John W.)	
Agreed with Dr. Hancock as to the imperial necessity of the compulsory education of a population who came over here in such large proportions to mix with our working classes; religious difficulties connected with the appointment of clergymen on school committees	477
Hancock (W. N.), reply in discussion :	
The necessity for getting rid of the offensive clauses in the Emancipation Act [confiscating the endowments of religious orders], which had been reported on by a House of Commons Committee, 1872, but not recommended for removal; each religion had their special schools called "National Schools," to obtain the public grant, but really not mixed schools; the attendance committees he proposed to nominate, not elect.	478-9
HANCOCK (W. Neilson). <i>Remarks in discussion</i> (Ravenstein on the Celtic Languages)	636
HANCOCK (T. W.). <i>Remarks in discussion</i> (Ravenstein on the Celtic Languages)	640
HANSEN'S Denmark's Statistic, vol. iii (notice)	331
HARVESTS, deficient, of 1875-77, bad effects of	46-8
of 1878, a bare average, crop returns, &c.	295-7
see <i>Agriculture</i> (Crops). <i>Agricultural Produce.</i>	
HAYTER (Henry Heylyn). <i>The Colony of Victoria: its Progress and Present Position</i>	369
Its origin, forty-three years since, due entirely to private enterprise	369
Victoria, a thirty-fourth part of Australia, with 44 per cent. of the inhabitants	370
Comparison of its revenue (4½ millions), with other colonies, showing its greater amount, and its proportion per head more than twice that of Great Britain	371
Amounts of taxation per head in the Australasian Colonies	372
Proportion of public debts of various countries to their revenues (that of Victoria the least, viz., 4½ times)	373
Value of its imports and exports per head; number and tonnage of vessels; postal system; railways, &c.	374-5
Crops, live stock, minerals, total values of the produce	376
Manufactures and number of manufactories	376-7
Educational system, crime, sale of land	378-9
Summary of statements made relative to the colony	379-81
Tables of population, revenue, shipping, imports and exports	382-5
— land in cultivation, live stock, and produce	386
— average rate of wages, and average prices of produce, &c.	387-9
— statistics of Australia	390-91
<i>Discussion on Mr. Hayter's Paper :</i>	
Coles (John)	
The favourable results given in the paper to be accounted for by the large proportion of adults in the population of Victoria; the position of its Government not so favourable	392
Prance (R. H.)	
New South Wales preferable to Victoria, as possessing free trade and a liberal Government, while the latter was governed by the principles of the trades' unions	392
Lefevre (G. J. Shaw)	
Want of data in the paper for the comparison of the condition of New South Wales under free trade and Victoria under the protective system; great falling off in the production of gold, and small average production of corn; proportion of crime in Victoria much less than in some of the other Australian colonies, and that of education high	393

HAYTER (Henry Heylyn). *Discussion on his Paper—contd.*

Walford (Cornelius)

Question as to the amount of wool exported, and to what countries, as though with 10 million sheep in the colony there were only eight textile manufactories; want of statistics on fires for economical purposes as adopted in Russia

394

Cohen (Lionel L.)

Importance of the question whether the imports and exports of Victoria had proportionately increased under protection or not; he believed they would have been quintupled under free trade

394-5

Doxey (Rev. I.)

Want of more correct statistics as to cattle, wages, prices of food and clothing, and house rent, as compared with former years; deficiency in wheat produce per acre

395

Westgarth (William)

Matters of revenue from railways, land, &c., to be considered in comparing the taxation of old countries and colonies; the moderate public debt of Victoria likely to increase; questionable value of a colony being independent of others for manufactures

395-6

Paul (Moncrieff)

Peculiarities connected with the land revenue, and the purchasers of land in New South Wales; railways in Victoria in the hands of the Government, and large amount of produce for export attracted by them: Victoria not a country for large wheat produce; large export of wool since 1837, but slight decrease in 1878 from drought, and probable further decrease from the shipping of the Rivarina wool being diverted to Sydney; gradual decrease in the gold supply since 1867, and its cause; the increase of sheep much less than that of wool, showing there was a transit of the latter, soon to be lost, and diverted to Sydney as stated previously

396-9

Beran (G. Phillips)

Want of more statistics relative to the labour question, as our connection with the colonies was chiefly through the labouring class

399

Hooper (G. D.)

Question whether the excess of imports over exports arose from protection, or from gold discoveries; the amount of revenue compared with debts, a doubtful measure of prosperity, as instanced by Peru, &c.

400

Giffen (Robert)

The real comparison should be, not between debt and revenue, but between debt, revenue, and taxable income; doubtful benefits of protection to Victoria; value of age-proportions in a population for comparison of criminal statistics; value of Mr. Hayter's "Year Book of Victoria"

400-401

Pochin (H. D.)

The revenue of Victoria in comparison with that of Great Britain, largely made up of railway, postal, and telegraph receipts

401

Pearson (C. H.)

Advance of the yield of wheat per acre in England since the fourteenth century, from 8-12 to 28 bushels; South Australia the great wheat producing country of Australia; the protective system a failure as to the woollen manufactures; excuses for Victoria having adopted a protective tariff, &c.

401-2

Bridgwater (—)

Question of introduction of moisture into the soil of Victoria by artificial means

403

Hayter (H. H.), reply:

With regard to protection, he had stated only that it had stimulated manufacturing industry; on the relative merits of free trade and protection he did not give an opinion; instances of the high credit and progress of Victoria in the new loan, and the non-decrease of exports under great fall in yield of gold; superiority of the Victorian wheat compared with that of New Zealand and Tasmania; other points in the discussion replied to, relative to textile manufactories, fires, collection of statistics, the passage of wool from New South Wales by Victoria, railways and ports, revenue and debts, &c.

403-5

HEYWOOD (James). Notice of M. Guerry's analytical tables 656

HILDEBRANDT'S "Science Index" (notice) 334

HOOPER (G. D.). *Remarks* in discussion (Hayter on Victoria) 400

HOWARD PRIZE MEDAL for 1878. Notice of its award to John Martin for essay "on the Effects of Health and Disease on Military and Naval Operations," and to Captain H. Hildyard for ditto

568

	PAGE
HOWARD PRIZE MEDAL— <i>contd.</i>	
for 1879 assigned to Miss Beatrice A. Jourdan	765
subject for 1880	765
HUDSON (Thomas). <i>Remarks</i> in discussion. (Walford on Famines)	266
HUNTER "on Statistical Survey of India" (notice)	539
IMPORTS, United Kingdom, 1874-78	358
of live stock, corn, and dead meat and provisions from 1859 to 1878, and proportion per head of the population	808
and exports of coin and merchandise of different countries (<i>tables</i>), 1860-77	437-8
and exports of the United Kingdom (<i>tables</i>), 1872 and 1878	439-43
see <i>Trade</i> .	
IRELAND. Statistics of the Irish speaking population, &c.	581-91
IRON. Depression of trade, <i>tables</i> of production, &c.	497-9
IRON TRADE, unhealthy activity in, from over-construction of railways, 1868-73, &c.	282
JENKINS (B. G.). See <i>Death-Rate</i> .	
JEVONS (Stanley). <i>Remarks</i> in discussion (Giffen on Fall of Prices)	70
<i>ditto</i> (Bourne on the Silver Question)	446
<i>ditto</i> (Hancock on Compulsory Education in Ireland)	473
<i>ditto</i> , celticising effect on our population of a constant Irish immigration	640
<i>ditto</i> (Guy on Tabular Analysis)	657
JOURDAN (Beatrice A.), the Howard Prize Medal awarded to	765
JUPITER (the planet), motions of, coincidence of with death-rate. see <i>Death-Rate</i> .	
LABOUR, "Massachusetts's Bureau of Statistics of Labour, Tenth Report" (notice)	545
LANDOWNERS. See <i>Farmers</i> .	
LANGLEY (—). <i>Remarks</i> on a movement for bi-metallic currency	447
LANGUAGES (CELTIC) in the British Isles, statistics of (see <i>Ravenstein</i>)	579
LEFEVRE (G. J. Shaw). <i>Address as President of Section F of the British Association, at the Forty-Ninth Meeting, held at Sheffield, in August, 1879</i>	771
Notice of the previous address of Dr. Ingram	771
The causes of the agricultural depression chosen as the subject of this address	771
The loss in wheat production compensated by rise in price up to 1873, but since then deficiency and low prices have been concurrent	772-3
Large increase of importation of foreign wheat during the last six years	774
Great saving to the whole country from the low price of wheat during that period	775
The excessive railway construction in America, the cause of so much corn coming from the States to the English markets, and the lowness of price	776
— the railway collapse in America in 1873, its ruinous effects, and stoppage of emigration from this country	776-7
— increase of wheat production in America (principally beyond the Mississippi) since 1849, from 100 millions to 420 millions of bushels	777-8
Probable effects of future contemporary bad harvests in America and good in England, and other circumstances, in raising the price of wheat	779-80
Depreciating effects of the far west competition on the farming interests and land value in New England	780
The agricultural portion was in 1831 28 per cent. of the entire population of England and Wales, and is now but one-tenth	781
The distress in England from the recent depression in commerce less than in other countries, and probable speedy revival of trade	781-2
<i>Remarks</i> in discussion (Giffen on Fall of Prices)	76
<i>ditto</i> (Walford on Famines)	275
<i>ditto</i> (Hayter on Victoria)	393
<i>ditto</i> (Bourne on the Silver Question)	450

LEFEVRE (G. J. Shaw)—*contd.*

<i>Remarks</i> in discussion (Hancock on Compulsory Education in Ireland)	475
<i>Remarks</i> at the anniversary meeting on the condition of the Society, papers read, and the question of a larger room for the meetings, &c.	573
notice of Dr. Bowditch's system of collection of facts on cards	658
LEVI (Leone). <i>Remarks</i> in discussion (Mouat, International Congresses)	32
<i>ditto</i> on the cultivation of opium as a cause of famine in India	266
<i>ditto</i> in objection to a bi-metallic currency	447
LIBRARY of the Society. <i>Notes on Recent Additions to in 1879</i>	334

Vine's "Municipal Corporations' Companion and Year Book;" Vine's "County Companion;" Palgrave's "Banking Almanac and Year Book;" and Hayter's "Victorian Year Book" 334-5

Mosser, "L'Esprit de l'Economie Politique;" "Report of the Special Committee of the Liverpool Chamber of Commerce;" "Tenth Report of the Massachusetts Bureau of Statistics of Labour;" "American Almanac," by A. R. Spofford; the "Colonial Office List" 543-47

Vine's "English Municipal Institutions;" Forbes Watson, "Report on Indian Wheat;" "Le Journal des Economistes;" Ramsay's "History of the Highland and Agricultural Society of Scotland;" "Zeitschrift of the Royal Statistical Bureau of Prussia, &c." 736-41

F. X. Neumann-Spallart and G. A. Schimmer, "Die Reichsraths-Wahlen 1879 in Oesterreich;" Berg (N. P. Van den), "The Silver Question;" Weisz (B.), "Der Einfluss des Agios auf den Aussenhandel;" Brassey (T.), "Foreign Work and English Wages, with Reference to the Depression of Trade;" "Statistical Abstract of the United States;" Amici, "Essai de Statistique Générale de l'Egypte;" Marshall (Alfred), "The Economics of Industry;" Watson (W. West), "Vital, Social, and Economical Statistics of Glasgow for 1878" 860-73

LIBRARY of the Society, additions to, in 1879 { 335-44
547-58
741-9
873-82

LITERATURE (English). See *Books*.

LITERATURE of famines, *tables* of, 1496-1878 246-65

LIVE STOCK. See *Agriculture*.

LLOYD's statistics of marine casualties. See *Shipwrecks*.

LOANS, foreign, issued in London, 1860-74 489

LONDON. See *Fires of*.

MADSEN's "Mathematical Laws of Traffic" (notice) 332

MAN (ISLE OF), decrease in the use of the Manx language in 591-2

"MANNEQUIN, le problème monétaire" (notice) 333

MARINE CASUALTIES. See *Shipwrecks*.

MARRIAGES. See *Registration*.

MARSHALL (Alfred). "The Economics of Industry" (analytical notice of) 870

MARTIN (John B.). *On Some Effects of a Crisis on the Banking Interest* 663

Condition of affairs during 1878: depression of trade with abundance of money and low rates, and defective harvest, followed by the bank failures, and consequent panic and crisis 663

Statistics unattainable as to private banks 664

Reference to Mr. Dun's paper in 1876 (vol. xxxix, p. 1) 664

Explanation of *tables* of comparison used (I-VI); London joint stock banks, English provincial banks, Scotch banks, Irish banks, and the Bank of England 664-5

Question as to how much of a bank's assets and balance may be considered as "cash" 665-6

Decrease of deposits in the London joint stock banks in 1878, 10½ millions, and attempt to explain its causes and destination 666-7

Comparative liabilities of the country, Scotch, and Irish banks to those of London 667

Bank of England: variations in its liabilities and public deposits up to 1st January, 1879, when the crisis was over 667-8

Percentages of capital to liabilities, London, provincial, Scottish, and Irish banks 668

Table VII; profit and loss of London joint stock banks in June and December, 1878 669

	PAGE
MARTIN (John B.). <i>Effects of a Crisis on the Banking Interest—contd.</i>	
Variations in the bank rate and call rate, and calculation as to the net profit or liabilities	670-71
Tables IX, X, showing depreciation in cash value of shares of the banks in December compared with June, 1878, showing a total depreciation of 34 millions	672-4
Tables showing the depreciation much greater in unlimited than in limited banks	674-6
Comparison of the effects of the panic of 1866 with that of 1878, with tables of the value of bank shares, and of liabilities to the public before and after the panic of 1866	676-80
Average bank rate for five years preceding the two panics, and comparative differences in their circumstances	678
The increase of business of country banks since 1866, compared with the London banks as 250 to 111	679
The Bank of England balance sheets in 1866 and 1878, comparative rise in deposits and securities from increased accommodation	679-80
Points of the paper which answer the objects of the Society as being of present interest to the public	680
Weak points in the present system of banking, and legislative attempts to correct them proposed	681
Gradual progress from the deposit or promissory note of the seventeenth century to the modern bank note	681-2
The non-legal-tender note circulation, danger of centripetal influence on in panics, as compared with the centrifugal one with Bank of England notes as illustrated in 1866 and 1878	682-
Sir Robert Peel's endeavour to supersede gradually the local by Bank of England notes, and its effects, 1842-78	683
Questions affecting the interests of proprietors and shareholders, and difficulties in obtaining efficient audits	685-6
Limited and unlimited liability; consequences of exempting trustees from liability, &c.	687
The credit of joint stock banks founded chiefly on their reputation for prudent management; that of private banks on the known or private fortunes of the owners	687
A scheme proposed for regulating the limit of liability	688
Advantages of freedom from Government interference in private dealings and contracts, except in matters affecting public morals	689
Tables of balance sheets of London joint stock, provincial, Scotch and Irish banks, July and December, 1878, and Bank of England, with summary	690-97
— effect of crises of 1866 and 1878 on bank note circulation	698-700
Discussion on Mr. J. B. Martin's Paper :	
Patterson (R. H.)	
Apprehension excessive in regard to the City of Glasgow Bank failure, which was entirely exceptional, and the impossibility of conducting bank business at all on the hypothesis of fraud; shareholders in failures more properly the losers than depositors	700-701
Martin (Richard B.)	
Objections to Government interference in banking matters, but all companies where partners became so merely as an investment, and had no control over its affairs, should be registered, and <i>ipso facto</i> limited; undesirable tendency to increase statute offences	701
Walford (Cornelius)	
Legislation necessary for English banks which had been founded without power of limitation, and were at a disadvantage as compared with the chartered Bank of Scotland	702
Botly (—)	
Legislative interference necessary towards fixing the amount of liability on bank shares, and of trustees to the value of the estate in trust	702
Chubb (Hammond)	
Comparison of the state of banking matters producing the panic of 1866 and the crisis of 1878	703
Brown (Harold)	
He thought legislation necessary in banking matters; doubts as to the value of balance sheets and auditors' certificates; the shareholders of joint stock banks chiefly persons of small means, and their helplessness to protect themselves in any control of their affairs	704-705
Willans (J. W.)	
The prices of bank shares too high in late years (barely averaging 5 per cent. interest), and their depletion satisfactory; legislation necessary to render audits more trustworthy	705-6

MARTIN (John B.). *Discussion on his Paper—contd.*

Vanderbyl (Philip)

Little real difference between unlimited banks and limited banks in which only a small portion of the shares is called up; "specified liability" a preferable term to "reserved liability;" a reserve fund should be worked with till wanted to equalise dividends

706-7

Newmarch (William)

Rapid advance of joint stock banks in recent years from allowance of too liberal a rate of interest; wholesome change in the non-allowance of interest on current accounts; the losses of 1875 the result of too great an accumulation of money in certain quarters; want of increase of the reserves of the Bank of England with the increase of the business of the country

707-8

MARTIN (R. B.) *Remarks in discussion* (Mouat on International Congresses)

31

ditto (Martin, Effects of a Crisis on Banks)

701

METALS, PRECIOUS, bi-metallic and other theories

428-32

see *Gold, Silver*.

METEOROLOGICAL TABLES (general) by James Glaisher

350-51

MORTALITY of England and Wales, annual rate per 1,000 in eleven divisions in town and country districts and in special towns; all quarters, 1877-78

347-8

occasioned by famines, with reference to particular dates

222-6

MOSSER, "Economie Politique" (notice)

543

MOUAT (Frederick J., M.D.). *Reports on: 1. The Fourth Session of the Permanent Commission of the International Statistical Congress. 2. The First Session of the International Congress of Demography and Medical Geography. 3. The Second Session of the International Prison Congress, 1878*

1

Statistical Congress—Reference to previous meetings

1

— removal of the fourth session from Rome to Paris, constitution, officers, proposals submitted to the sub-committees, &c.

2-3

— the permanent commission, resolutions drawn up and embodied by the

3-6

— advantages of its fixing the programme, the local details being left to the organising committee

7-8

— statistics of its functions and composition, meetings, &c.

8-11

Statistical annuals, arrangements adopted in different countries

12-14

English annual official publications: our statistical abstracts published by the Board of Trade and India Office, &c.

15-16

M. Deloche's proposed form of scientific classification for international statistics

17-21

Difficulties connected with scientific classification, and proposal for a more simple temporary arrangement

21-2

International Congress of Demography: definitions of demography as a science, and as the population branch of statistics

23-4

— enumeration of subjects discussed: census, cause of death, still-born, &c.

25

International Prison Congress at Stockholm: question of international penitentiary statistics discussed; on a report of M. Yvernés on a proposed formulary

25-6

— resolution of the congress as to continuing the method of 1872, and leaving to each nation to devise its own formulæ

27

— the questions for discussion prepared by the permanent commission beforehand, and the adoption of the reports prepared by the speakers themselves

28-9

Proposal for the meeting of the Statistical Congress for 1880 in London

30

Discussion on Dr. Mouat's Paper:

Martin (R. B.)

Enumeration of many subjects on which international congresses would improve our knowledge

31

Levi (Professor Leone)

Congratulations on Rome being the appointed *locale* of the next Statistical Congress; disappointed at the results of the statistical commission as to statistical annuals, &c.

32

Purdy (Frederick)

Government administrators not statisticians; the question of pauperisation or not; and difficulty of national co-ordination of pauper and criminal statistics

32-3

	PAGE
MOUAT (Frederick J., M.D.). <i>Discussion on his Paper—contd.</i>	
Walford (Cornelius)	
Difficulty of one arrangement for statistics of all countries, and probable effectiveness of a simple alphabetical enumeration	33
Giffen (Robert)	
Complimentary remarks on Dr. Mouat's effective representation of the Society at the congresses. Notice of valuable papers read at them by Poznanski, Spallart, and Tisserand: an alphabetical probably the best arrangement for an international "annuaire"	33-4
Mouat (Dr.), reply in the discussion	34
MOUAT (F. J.) <i>Notice of his representation of the Society as delegate at the foreign congresses in 1878</i>	566
MUN'S "England's Treasure by Foreign Trade" (notice of)	183
MURRAY (J. C.). <i>Remarks in discussion (Bourne on the Silver Question)</i>	453
NEUMANN-SPALLART und Schimmer, "Reichsraths-Wahlen 1879 in Oesterreich" (notice)	860
NEWMARCH (William). <i>Remarks at the anniversary meeting on the necessity for more commodious house accommodation, &c.</i>	574
<i>Remarks in discussion (Martin on Effects of a Crisis on Banks)</i> .	707
<i>see Banks (Increase in and in their branches, 1858-78).</i>	
PANICS of 1866 and 1878, comparison of the effects of	676-80
PATTERSON (R. H.). <i>Remarks in discussion (Walford on Famines)</i> .	266
<i>ditto (Martin, Effects of a Crisis on Banks)</i>	700
PAUL (H. MONCREIFF). <i>Remarks in discussion (Walford on Famines)</i> .	268
<i>ditto (Hayter on Victoria)</i>	396-9
<i>ditto (Ravenstein on the Celtic Languages)</i>	638
<i>ditto (Guy on Tabular Analysis)</i>	659
PEARSON (C. H.). <i>Remarks in discussion (Hayter on Victoria)</i> .	401
POCHIN (H. D.). <i>Remarks in discussion (Hayter on Victoria)</i> .	401
POPULATION of England, the agricultural portion in 1831 28 per cent., now only 10 per cent.	781
of United Kingdom, <i>table of, 1859-78, with amount of imports per head of population</i>	808
POPULATION of France. <i>Statistical Results of the Last Census of the Population of France</i> [translated from "Journal of the Statistical Society of Paris"]	522
Population of France, December, 1876, 36 $\frac{1}{2}$ millions, showing increase of 800,000 since 1872 (three-fifths urban and two-fifths rural); comparative emigration and immigration in departments and towns	522-3
Population: 70 per square kilomètre; number of households and of foreigners, sexes, civil status, and ages	524-6
Population according to occupations, and to active and non-active elements .	526-8
POSTMASTER-GENERAL of Japan's report, 1878 (notice)	332
POULTRY, statutes for governing the sale of, 1276 and since	101, &c.
P'RANCE (R. H.). <i>Remarks in discussion (Hayter on Victoria)</i>	392
PRICES of food and labour in 1450, 1500, 1550, and 1650	{ 112-13
of food and materials, <i>table of relative, 1859-78</i>	{ 117-21
of wholesale commodities, food, &c., <i>tables of, 1845-78</i>	41
wholesale, in London, <i>tables, 1867-79</i>	61-4
<i>tables of consols, provisions, pauperism, and coal, 1876-78</i>	502
of goods, influence of on the foreign trade of France. <i>See Trade (foreign).</i>	347
high, of provisions, report of 1764 on	197
on the fall of, of commodities in recent years (<i>see R. Giffen</i>)	36

	PAGE
PRICES— <i>contd.</i>	
question of fall in, 1847-79, with <i>tables</i>	413-16
permanent fall of, from a scarcity of gold	310-11
<i>table</i> of, showing rises and falls of, 1845-79	38-9
PRICES of <i>Exports</i> from 1861 to 1877 [report by Mr. Giffen to the Board of Trade]	305
Explanatory observations of the <i>tables</i> , comparison of instances of change of prices in the years of prosperity, 1863-66, 1871-73, and in those of depression, 1867-69, and 1874-77	305-7
— plan adopted of an "index number" from the aggregate of the values assigned to the representative exports, and calculations therewith, showing that the decrease of the export trade in 1877 compared with 1875, may be accounted for by average fall of prices	307-10
— question of a permanent fall of prices, from a scarcity of gold	310-11
<i>Table</i> of average prices of exports of British produce in each year from 1861 to 1877	312-15
— ditto proportion per cent. of value of each article to total values of exports	316-17
— ditto, percentage increase or decrease in prices of 1865, 1868, 1873, and 1875-77 over 1861, calculated on proportion of each article to the whole exports in 1875	318-21
reference to this report, see <i>Trade</i> (foreign) of France.	
PRISON CONGRESS (international) at Stockholm, report (see <i>Mouat</i>)	25
PROTECTIONIST REVIVAL among the continental nations, 1878	259-90
PURDY (Frederick). <i>Remarks</i> in discussion (<i>Mouat</i> , International Congresses)	32
RAILROAD, opening of the Liverpool and Manchester, in 1830	92
RAILWAYS, excessive construction of, in America, the cause of the great exportation of corn; the railway collapse, &c.	776-7
RAMSAY'S "History of the Highland Society" (notice)	739
RAVENSTEIN (E. G.). <i>On the Celtic Languages in the British Isles: a Statistical Survey</i> (with coloured maps)	579
Statement of means adopted for obtaining the information required	579-80
Ireland: questions as to the value of the census returns on the Irish speaking population	581
— coloured maps, and explanatory details of the Irish speaking districts	582-4
— <i>tables</i> of numerical details of ditto	584-6
— gradual decrease of the Irish speaking population, 1851-71, from 23 to 15 per cent. of the population	586
— comparison of male and female Irish speaking population	586-7
— other causes of decrease; emigration and migration, national schools, &c.	587-8
— relative decrease of Irish in different baronies, and notice of those where last spoken	588-90
— "Society for the Preservation of the Irish Language;" its publications and objects	589-90
— <i>table</i> showing 87 per cent. of population to reside in districts to all intents and purposes English	591
Isle of Man: great decrease in the use of Manx since the beginning of the nineteenth century; names of places where it chiefly remains	591-2
Scotland: statements of the relative extent of the use of Gaelic in counties and districts where in disuse, &c.	592
— Caithness (English, north-east, and Gaelic, south-west) and Sutherland (Gaelic throughout)	593
— Ross and Cromarty (Gaelic chiefly on west coast)	594
— Inverness-shire and Elgin (the Western Hebrides the stronghold of Gaelic)	595-6
— Banffshire, Nairn, &c.	597-8
— Perthshire (general decay of Gaelic throughout, except in Killin and Strathfillan)	598-601
— Stirlingshire (Buchanan the only Gaelic district), Dumbartonshire (the only district, Arrochar)	601
— Argyleshire and Buteshire (great variety in numerical proportion, English district round Dumoon, the islands chiefly Gaelic, the Cumbraes English)	602-4
— comparative <i>tables</i> of the Gaelic speaking population	605-6
— the chief agencies in the decay of Gaelic: the emigration of the Gael, and the filling up his place with southern graziers and sportsmen	606-7
Wales: linguistic boundaries, &c., in Flintshire and Denbighshire	608-9
— ditto in Shropshire and Montgomeryshire	609-11
— ditto in Radnorshire; Welsh black letter Bibles in 1620; the Church and Independents' Services now all in English, and the Welsh language nearly extinct	611-12

	PAGE
RAVENSTEIN (E. G.). <i>Celtic Languages in the British Isles—contd.</i>	
Wales: linguistic boundaries in Breconshire (language of the majority Welsh), Monmouthshire (small portion in extreme west Welsh)	612-14
— ditto, Glamorganshire (English generally spoken, but the language of the majority and of religious services Welsh)	615-16
— ditto, Caermarthenshire (intensely Welsh); Pembrokeshire (north, Welsh, south, English); Cardiganshire, Merioneth, Carnarvon (chiefly Welsh throughout).	616-20
— table of geographical distribution of the Welsh speaking population, &c.	620-21
— the Welsh-speaking Welsh in England and Wales 996,500, and therefore a more formidable body than either their Scottish or Irish kinsmen	621
— increase of Welsh services in the Church, and among Dissenters, though the schools are all English	622
Table of Gaelic speaking Celts in the British Islands	622-3
Appendix of tables (in districts) of the Irish speaking population, 1851 and 1871	624-35
— ditto, Gaelic in Scotland, and Welsh	635-6
Discussion on Mr. Ravenstein's Paper:	
Hancock (Neilson)	
The excess of Irish speaking population in Ulster over that in Leinster, owing to one district in the Newry mountains; the diminution of Irish speaking greater in Munster, 1861-71, than that in Connaught, owing to the opposition in the latter of a dignitary of the Roman Catholic Church to the national schools; benefits of teaching Irish in schools, that those who learnt to read in it always learned English after, but those who learned English, never attained more than a parrot-like knowledge of Irish	636-8
Paul (H. Moncreiff)	
The position of the Celtic races always in the west and north-west; the answers to the circular of the Education Department of Scotland, mostly in favour of learning Gaelic previous to English; Gaelic as prevalent in Balquhiddar as in Strathfillan; doubts as to the use of perpetuating Gaelic and supporting a Gaelic chair in the university, except for philological purposes	638-9
Saunders (C. E.)	
The English spoken in Inverness purer than in any other part of Scotland, though almost all the population spoke Gaelic	639
Walford (Cornelius)	
The facilities for obtaining information on education, and vital statistics contained in the maps and linguistic details of the paper	639-40
Jevons (Stanley)	
Numerous perplexing questions which might be explained ethnographically; Celticising effect on our population of a constant Irish migration into England, and of English into Australia	640
Hancock (T. W.)	
The Welsh speaking population, about 1,006,450, and of these 62,000 in England; about fourteen Welsh newspapers, twenty monthly periodicals, and two quarterlies	640-41
Ravenstein (E. G.), reply:	
Mode in which he had endeavoured to verify his statements and eliminate error; the pure English of Inverness due to its being learnt from books without accent, as the best German was said to be spoken in the Baltic provinces of Russia; advantage of teaching in the Celtic languages as the only means of reaching thousands of children ignorant of English	641-2
Paul (H. Moncreiff)	
The English of Inverness learned from English soldiers quartered there	642
Rawson (Sir R. W.), <i>Chairman</i>	
The cause of the Celtic races being driven north and west was the entry of the civilised races at the east and south; the knowledge of English by the whole population of the United Kingdom could not be stopped in its progress, and impossibility of preserving the ancient languages in the modern vernacular	642-3
RAWSON (Sir R. W.) <i>Remarks in discussion (Ravenstein on the Celtic Languages)</i>	642
<i>Remarks on the extraordinary wheat production of California, and the opposing dangers of droughts, hurricanes, heavy cost of transportation, &c.</i>	767-9
REGISTRATION of marriages, births, and deaths (serial tables), 1872-78	345
divisional tables, 1878	349

	PAGE
REGISTRATION— <i>contd.</i>	
annual rate per 1,000, 1872-79	346
special <i>table</i> of twenty-three large towns	348
ditto, Scotland	
(serial, average, bastardy, and divisional <i>tables</i>)	352-5
summary of Great Britain and Ireland :	
Quarter, September—December, 1878	355
see also <i>Mortality</i> .	
REVENUE, net produce of, and application, &c., in years and quarters ending :	
31st December, 1875-78	366
REYNOLDS (F.). <i>Remarks</i> on the waste in our fisheries	267
RUSSIA, movement of travellers between and other countries, 1857-76, (see <i>Travellers</i>)	528
SAUNDERS (C. E.). <i>Remarks</i> in discussion (Ravenstein on the Celtic Languages)	639
SCARCITY of 1800, the Westminster "engagement" for frugality in families in	132
SCHOOLS, statistics showing non-attendance at, in Ireland, in 1871, as 54 per cent. to 39 in England, and 30 in Scotland, &c.	459
SCOTLAND, statistics of the use of the Gaelic language in	592-607
SEVERN (RIVER), an act for the preservation of the, 1542	115
SHAW-LEFEVRE. See <i>Lefevre</i> (Shaw).	
SHEEP, enactments as to number which may be kept, 25 Henry VIII, 1533	114
fertility of soil under English farming due to large number of sheep maintained	758
SHIPPING. Tonnage of vessels, foreign and colonial trade, United Kingdom :	
January—December, 1876-78	360
SHIPWRECKS. <i>Lloyd's Statistics of Marine Casualties for 1878</i>	505
Comparison of number and results with the seven years 1872-78: <i>tables</i> of lives lost, crews reported saved or drowned, casualties, missing vessels, and burnt or on fire	505-9
<i>Tables</i> showing number of wrecks and casualties to sailing vessels and steamers in 1878, compared with twelve previous years, with results to ship and cargo, salvage services, crews saved or drowned, lives lost, and respective percentages	510-21
SILVER money (English), <i>tables</i> of standard weight and value of, 1066-1765	167
on some phases of the silver question (see <i>S. Bourne</i>)	406
<i>tables</i> of annual production, 1842-77, shipment to the East, 1866-78	490-92
<i>tables</i> of production of, 1852-78	436
<i>table</i> showing estimated production of, in each year, since 1849	409-10
questions of its production and depreciation since 1849	422-5
new fall in, its causes, &c.	286-7
depreciation of, its connection with the prolonged discredit of trade	56-7
— since 1859, its connection with rise in value of gold	407-8
— in value of, question of its effects, and fallacy of attributing the decline in our exports, fall of prices, &c., to	425-8
SMITH (ADAM), opinion on legislative restrictions on commerce	95
SOETBEER'S "Edelmetall Produktion" (notice)	542
SPECULATION, laws against, supposed to be in the interest of the people	197
in food; <i>table</i> of, extracts from statutes on, 1266-1844	199
SPIRITUOUS LIQUORS, ACT, 33 George III, for preventing excessive use of	215
SPOFFORD'S "American Almanac" (notice)	546

	PAGE
STANSFELD (Rt. Hon. Jas.) <i>Remarks</i> in discussion (Hancock on Compulsory Education in Ireland)	472
STATISTICAL ABSTRACTS of the Board of Trade, &c.	15
STATISTICAL ANNUALS, arrangements adopted in different countries	12-14
STATISTICAL CONGRESS, International, permanent commission of, fourth session (see <i>Mouat</i>)	1
STATISTICAL SOCIETY:	
report of the Council, June, 1879	559
abstract of receipts and payments for 1878	570-71
proceedings of the forty-fifth anniversary meeting	573
proceedings of the meeting of 18th November, 1879	765
proceedings at ordinary meetings, and titles of papers read, 1878-79	562
notices of deceased Fellows during 1878-79	568
question of obtaining improved house accommodation for the meetings and library	573-7
ditto (W. A. Guy)	765-7
inaugural address of the President, November, 1879 (see <i>Brassey</i>)	751
STATISTICS. <i>Statistics in Parliament</i>	784
Statistical portions of the speeches of Mr. Chaplin and Mr. T. Brassey, on the motion, by the former, for a Royal Commission on agricultural depression	784-90
STATISTICS (<i>Miscellaneous</i>) of the United Kingdom [Report by R. Giffen to the Board of Trade]	724
Historical notice of the original " <i>tables</i> of Revenue, Population, &c., from 1820," published by Mr. Porter in 1832, and the various statistical abstracts, &c.	724-5
The " <i>Miscellaneous Statistics</i> ," composed of home statistics; and completing, with the " <i>Trade and Navigation</i> ," and " <i>Colonial Statistics</i> ," the whole statistics of the empire, excepting India	725
— causes why they have unjustly fallen into the background; additions relative to education and wages in the present time	724-7
STEAMBOATS, first, the "Comet," on the Clyde, 1812	92
SUMPTUARY LAWS, notice of dates of, 1336-1593	137
SUN-SPOT CYCLES. See <i>Boat Races</i> .	
TABULAR ANALYSIS, on (see <i>Guy</i>)	644-55
"TARIFFS of Europe and United States, 1840-78" (notice)	736
TODD'S (T. J.) " <i>Book of Analysis</i> ," summary and analysis of its details (see <i>Guy</i>)	644
TOKENS, tradesmen's, their origin, temp. Henry VII, and subsequent use	188
TRADE, <i>tables</i> of imports and exports, declared values, 1856-77	356-7
character of, in 1878	284-6
relation of production and quantity of the precious metals to state of	408-11
connection of depression of, with decay in the value of silver, &c. foreign, values of imports and exports, 1877-78, Board of Trade returns, &c.	425-8
TRADE (FOREIGN) of France. <i>Influence of the Prices of Goods on the Movements of the Foreign Trade of France</i> [from articles by A. de Foville in the " <i>Economiste Français</i> "]	298-304
The values of imports and exports based on a tariff of mean rates of values settled in 1827, and revised in 1847 by a permanent commission	849
Reference to Mr. R. Giffen's report on English exports (p. 305), on their apparent reduction being due to lowering of prices	849
Table of official and real values of imports and exports, 1847-62, compared with 1827, and of provisional and final valuations, 1863-78, compared with 1862	850-54
Comparison of these tables and their results, showing upward movement of prices from 1848 to 1864, and period of depression since	854-5
Substitution of the curve of quantities exported for that of values, showing the apparent decrease of exports to consist only in reduction of prices	855-7

	PAGE
TRAMWAYS, their origin as early as 1602	92
TRANSPORT, defective, as a cause of famines	82
TRAVELLERS. <i>The Movement of Travellers between European Russia and Foreign Countries, 1857-76</i> [from articles by A. Vessélovsky, in "Journal de St. Pétersbourg," December, 1878]	528
Totals of arrivals and departures of travellers, 1865-76, with explanations of influence of railways, passport modifications, Polish insurrections, &c., showing numbers to have trebled since 1856	529-30
Comparison of numbers of Russians and foreigners, showing excess of departures of the former, and of arrivals of the latter, with <i>tables</i> analysing the various nationalities and their proportions	530-34
UNITED STATES. Resumption of specie payments in, in 1877-78, and its effects on our bank reserve	288-9 292-3
URLIN (R. Denny). <i>Remarks</i> in discussion (Walford on Famines)	267
VANDERBYL (Philip). <i>Remarks</i> in discussion (Martin, Effects of a Crisis on Banks)	706
VESSÉLOVSKY (A.). "Annuaire des Finances Russes" (notice of)	733
see <i>Travellers</i> (movement of between Russia and other countries).	
VICTORIA, the colony of, its progress and present position (see <i>Hayter</i>)	369
<i>tables</i> of population, revenue, shipping, trade, produce, &c.	382-9
VINE'S "English Municipal Institutions" (notice)	736
WAGES (agricultural), the rise of, just previous to the commencement of bad seasons and increased foreign competition	538
high rate of, in the United States	759
WALES, statistics of the Welsh speaking population of	608-22
—the Welsh speaking Welsh in England and Wales 996,500	621
WALFORD (Cornelius). <i>The Famines of the World: Past and Present</i> . Part II	79
Artificial causes of famines enumerated [confined to the United Kingdom]	79
War: its general effects as productive of famines [for its effects on the price of grain and in taxation of food, see <i>Tables XIV and X</i>]	79-80
Defective agriculture, famines from, in early periods of our history, commencement of inclosure Bills under George II, and drainage of fen districts	80-81
— successive statements of the extent of land under crops since those of Arthur Young	81-2
Defective transport: <i>Table VIII</i> . Historical notes of Acts for making turn-pike roads, canals, paving, &c.	82-92
— Roman mode of constructing highways	84 (<i>note</i>)
Legislative interference: notice of the various causes which have successively produced legislative restrictions on exportation and importation	92-95
— Adam Smith's opinions, and their effects on previous legislation	95-6
— <i>tables</i> of imports and exports in different periods from 1697 to 1825	97
— large imports of wheat from the United States, decrease in those from Russia, and probable gradual increase from India and Australia	97-8
— <i>table</i> of supplies of foreign wheat from different countries, 1869-78	98-9
— importation of other articles of food in 1875-78	99
— <i>Table IX</i> (internal regulations), imperial and municipal restrictions on the price of food and dealings therein, from A.D. 1203 to 1846	100-32
— assize of bread and ale, and other articles of food since 1203	100, &c.
— ditto, reign of Elizabeth, 1595	119
— ditto, reign of Anne to Victoria	122-31
— statutes for governing the sale of fish and poultry from 1276	101, &c.
— prices of food and labour in 1450, 1500, 1550, and 1656	112-21
— enactments as to number of sheep which may be kept, 25th Henry VIII, 1533	114
— Acts for fixing prices of wines, 1536	115
— Act for the preservation of the river Severn, 1542	115
— sumptuary laws, reference to, and the Westminster compact "The Engagement," for frugality in families and their servants	132
— <i>Table X</i> (external regulations), legislative restrictions and other provisions on the export or import of grain and other articles of food from or into the United Kingdom, or parts thereof, from A.D. 1323 to 1869	133-63
— supplement showing the rates of duty on foreign wheat when British wheat was at prices per quarter between 50s. and 85s. from 1660 to 1842	163

	PAGE
WALFORD (Cornelius). <i>The Famines of the World—contd.</i>	
Currency restrictions: modes by which a currency may be debased, and be disadvantageous to its holders in times of scarcity, with historical notices of times of debasement	163-65
— notices of depreciation of coins in France, Spain, and Scotland	165 (note)
— instance of defrauding by Heliogabalus, by increasing the weight of gold in the "aureus"	166 (note)
— table of the standard weight and value of English silver money from 1066 to 1765	167-8
— depreciation from clipping, filing, and sweating of coin: the first mode easily effected on the hand-made coins of the thirteenth to fifteenth centuries	169
— Table XI. Currency restrictions, legislative and otherwise, especially including debasing the coin, whereby influences upon the price and supply of provisions have been brought into play, B.C. 55—A.D. 1869 (partly from Sir C. Whitworth's "Inquiry into Prices," "Wade's History," &c.)	171-96
— "King's Exchanges," the appointment of exchangers at the ports to furnish merchants going abroad with foreign money	178 (note)
— Mun's "England's Treasure by Foreign Trade," notice of	183
— tradesmen's tokens, their origin in the reign of Henry VII, and subsequent use	188 (note)
Speculation: the laws against speculation, forestalling, &c., tolerated because supposed to be made in the interest of the people	197
— report from the Committee on the high price of provisions, 1764, as partly caused by combinations	197-8
— Table XII. Speculation in grain and other articles of food, known as "engrossing," "forestalling," and "regrating." Extracts from statutes on, from 1266 to 1844	199-211
Misapplication of grain: Tables by Mr. Charles Smith and Dr. Colquhoun, showing consumption of grain in 1765 and 1814 by man per head, by animals, in distilling, malting, &c.	212-13
— Table XIII: Misapplication of grain by its excessive use in brewing, distilling, or by misadventure. Acts for restricting, 1250-1808	214-17
— Act 24 Henry VIII, for destroying crows, rooks, &c., on account of their consumption of corn and grain	214
— Act 33 Geo. III, for preventing excessive use of spirituous liquors	215
General remarks on the preceding tables of artificial causes of famines	217-25
Supplemental observations: prevention of famines in the future	220-22
— not to be averted by legislative action, but as illustrated by India, to be left to commercial enterprise, with improved cultivation and means of transport	221-2
— on the mortality occasioned by famines; association of epidemics of fever and typhus with seasons of scarcity	222
— references to dearths and mortality at particular dates, 1801, 1841, 1846, and 1867, from Dr. R. D. Thomson, Professor Liebig, Dr. Farr, Dr. E. Smith, &c.	223-
Price of wheat in England	226
— Table XIV. Price of wheat in England and Wales from A.D. 1000, with a statement of the probable causes affecting the price	228-46
Famine literature: Table XV, the literature of famines and of the corn laws, &c., 1496-1878	246-65
<i>Discussion on Mr. Walford's Paper:</i>	
Patterson (R. H.)	
Famines caused by too much, or too little water, i.e., by cold and wet weather in northern, and by hot weather and scarcity of water in southern countries, and not by any depreciation of currency; probable effects of the changes in the sun, and in the position of the planets, in producing cyclical changes on our earth	266
Levi (Leone)	
Question whether the cultivation of opium caused famines in India	266
Hudson (Thomas)	
Misappropriation of grain in manufacture of intoxicating drinks, as instanced in the famine in Ireland, in 1846, when the foreign grain imported equalled the quantity consumed for alcoholic liquors	266
Reynolds (F.)	
Waste in this country of our fisheries	267
Urlin (R. Denny)	
The Irish famine of 1846, attributable to the failure of the potato, not of the grain crops; average size of farms since increased; Indian famines, another illustration of the danger of dependence on single crops; meteorology not sufficiently exact a science to be of use in foretelling famines	267
Doxey (Rev. I.)	
Did not consider the Irish climate unsuitable for corn, if land could be properly drained, like the fens in England; considered a debased currency to be one cause of scarcities, as also want of means of transport	268

WALFORD (Cornelius). *Discussion on his Paper—contd.*

Paul (H. Moncreiff)

Decrease in amount of wheat imported from India owing to famine, and low prices in this country; the factors in hindering famines he considered free trade, facility of transit, telegraphic communications, and improved cultivation; injurious effect of caste in India in stopping variety of food . . . 268-9

Hall (E. Hepple)

The question of thrift and waste overlooked in the paper; extravagance and wastefulness of the Americans and ourselves; waste a material element in the question of famines . . . 269

Danvers (F. C.)

Rice not the entire food of southern India, but of the rich, the poor depending on the dry crops; opium growing in India only a small area; the surreptitious growing of it between other crops in China much greater; future famines in India more of work, than of food; the value of grain much raised by the Indian railways . . . 269-71

Washburn (Hon. Mr.)

Considered that the increasing communication between countries would prevent famines; large crop of wheat and of Indian corn in America, the latter of which might be introduced very cheaply into Europe . . . 271-2

Walford (Cornelius), reply in discussion :

Difficulty of the question of the relation of currency depreciation to famines; destruction of crops by rooks and crows; numerous Acts of Parliament for the encouragement of the fisheries; fish and Indian corn a cheap food for poor people; large importations now of grain from Ireland, and capability of its increase; prevention of waste the prevention of poverty; Indian famines aggravated by migrations from one district to another; difficulty of the term "Indian corn," and proposed alteration to "maize;" errors of legislation productive of famines . . . 272-4

Goslin (S. B.)

Notes on the subject of famines arising from peculiarities of localities; modes of obtaining water for India, its want being the cause of the calamity . . . 274

Lefevre (George John Shaw)

Thanks to the author; the Hon. Mr. Washburn's attention drawn to the want of reciprocity with this country, in the high duties enforced by the Americans on our manufactures . . . 275

WALFORD (Cornelius). *Remarks in discussion* (Mouat, International Congresses)

ditto (Giffen on Fall of Prices) . . . 33

ditto (Hayter on Victoria) . . . 74

ditto (Ravenstein on the Celtic Languages) . . . 394

ditto (Guy on Tabular Analysis) . . . 639

ditto (Martin, Effects of a Crisis on Banks) . . . 656

ditto (Martin, Effects of a Crisis on Banks) . . . 702

WAR, its effects as productive of famines . . . 79

WASHBURN (Hon. Mr.). *Remarks in discussion* (Walford on Famines) . . . 271

WATSON (Forbes). "Report on Indian Wheat" (notice) . . . 737

WATSON (W. West). "Vital, Social, and Economical Statistics of Glasgow for 1878" (analytical notice of) . . . 872

WEISZ (B.). "Der Einfluss des Agios auf den Aussenhandel" (notice of) . . . 865

WESTGARTH (Wm.). *Remarks in discussion* (Hayter on Victoria) . . . 395

WHEAT, prices of, in England, with *tables* from A.D. 1000 . . . 226-46

table of annual production per acre and average price, in the years

1849-78 . . . 783

Gazette average price of, 1872-78 . . . 481

see *Prices of Food, &c.*

diminution in the quantities of, sold in the markets of England

and Wales (see *Corn*) . . . 709

the crop of 1879 the worst on record since 1816 . . . 808

see *Agriculture.*

table of crops of, in principal countries. . . 297

increased production of, in Western America, since 1849 . . . 777-8

yield per acre, 12.2 bushels in the United States, compared with

29½ bushels in the United Kingdom . . . 753

foreign, *table* of rates of duty on, 1660-1842 . . . 163

	PAGE
WHEAT— <i>contd.</i>	
<i>table</i> of imports and exports of, 1697-1825	97
<i>tables</i> of supplies of foreign, 1869-78	98-9
large increase of importation of foreign, during last six years	774
WHITEHEAD (—). Statement on our increased acreage of potatoes and fruit land	762
WHITWORTH (Sir C.). "Inquiry into Prices," notices extracted from	177
WILLANS (J. W.). <i>Remarks</i> in discussion (Hancock on Compulsory Education in Ireland)	477
<i>ditto</i> (Martin, Effects of a Crisis on Banks)	705
WINES, Acts for fixing prices of, 1536	115
WINE DUTIES, appendix to report on (notice)	735
WOOL, prices, <i>table</i> of values, 1873-78	496-7
 "YEAR BOOKS of Vine, Palgrave, and Hayter" (notices)	 334-5

(Corrected to 31st December, 1879.)

STATISTICAL SOCIETY,

(FOUNDED 1834.)

KING'S COLLEGE ENTRANCE, STRAND, W.C., LONDON.

Contents.

	PAGE
COUNCIL AND OFFICERS	2
OBJECTS OF THE SOCIETY	3
CALENDAR FOR SESSION 1879-80	4
PROGRAMME OF THE SESSION 1879-80	5
HOWARD MEDAL OF 1880, SUBJECT OF ESSAY FOR..	6
LIST OF THE FORMER PATRON AND PRESIDENTS....	7
Do. FELLOWS	8
Do. HONORARY MEMBERS	42
INDEX TO RULES	47
RULES OF THE SOCIETY	48
REGULATIONS OF THE LIBRARY	52
DONORS TO THE LIBRARY FOR THE YEAR 1879	53
COST OF BACK NOS. OF JOURNAL (<i>if not out of Print</i>).	58
FORM OF BEQUEST	59

LONDON:

PRINTED FOR THE SOCIETY,

BY HARRISON AND SONS, 45 AND 46, ST. MARTIN'S LANE,

Printers in Ordinary to Her Majesty.

1880.

STATISTICAL SOCIETY.

Honorary President.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.

COUNCIL AND OFFICERS.—1879-80.

Honorary Vice-Presidents.

(having filled the Office of President).

THE RIGHT HONOURABLE THE EARL OF SHAFTESBURY, K.G., D.C.L.	THE RIGHT HONOURABLE THE LORD HOUGHTON, D.C.L., F.R.S.
THE RIGHT HONOURABLE THE EARL OF HARROWBY, K.G., D.C.L.	WILLIAM NEWMARCH, Esq., F.R.S., F.I.A. (Corr. Member Inst. of France).
THE RIGHT HONOURABLE THE LORD OVERSTONE, M.A., F.R.G.S.	WM. FARR, Esq., M.D., D.C.L., F.R.S., &c. (Corr. Member Inst. of France.)
THE RIGHT HONOURABLE THE EARL OF DERBY, D.C.L., F.R.S.	WILLIAM A. GUY, Esq., M.B., F.R.C.P., F.R.S.
THE RIGHT HONOURABLE THE LORD HAMPTON, M.A., G.C.B., D.C.L.	JAMES HEYWOOD, Esq., M.A., F.R.S., F.G.S., &c.

GEORGE SHAW-LEFEVRE, Esq., M.P.

President.

THOMAS BRASSEY, Esq., M.P.

Vice-Presidents.

F. J. MOUAT, M.D., F.R.C.S.
A. J. MUNDELLA, M.P.

FREDERICK PURDY.
SIR R. W. RAWSON, C.B., K.C.M.G.

Trustees.

JAMES HEYWOOD, Esq., M.A., F.R.S. | SIR JOHN LUBBOCK, BART., M.P., F.R.S.
WILLIAM NEWMARCH, Esq., F.R.S.

Treasurer.

RICHARD BIDDULPH MARTIN, M.A.

Council.

MAJOR-GENERAL H. P. BABBAGE.
ARTHUR H. BAILEY, F.I.A.
T. GRAHAM BALFOUR, M.D., F.R.S.
A. E. BATEMAN.
STEPHEN BOURNE.
EDWARD WILLIAM BRABROOK, F.S.A.
JAMES CAIRD, C.B., F.R.S.
J. OLDFIELD CHADWICK, F.R.G.S.
HAMMOND CHUBB, B.A.
HYDE CLARKE.
LIONEL L. COHEN.
CAPTAIN PATRICK G. CRAIGIE.
JULAND DANVERS.
ROBERT GIFFEN.
FREDERICK HENDRIKS.

HENRY JEULA, F.R.G.S.
PROF. W. S. JEVONS, M.A., LL.D., F.R.S.
FRANCIS JOURDAN.
PROFESSOR LEONE LEVI, LL.D.
JOHN B. MARTIN, M.A.
RICHARD BIDDULPH MARTIN, M.A.
FREDERIC JOHN MOUAT, M.D., F.R.C.S.
ANTHONY J. MUNDELLA, M.P.
FRANCIS G. P. NELSON.
ROBERT HOGARTH PATTERSON.
FREDERICK PURDY.
ERNEST GEORGE RAVENSTEIN, F.R.G.S.
SIR RAWSON W. RAWSON, C.B., K.C.M.G.
ERNEST SEYD.
CORNELIUS WALFORD, F.I.A.

Secretaries.

HAMMOND CHUBB.

ROBERT GIFFEN.

PROFESSOR W. STANLEY JEVONS.

Foreign Secretary.

FREDERIC J. MOUAT, M.D.

Editor of the Journal.

ROBERT GIFFEN.

Assistant Secretary.

JOSEPH WHITTALL.

Bankers.—MESSRS. DRUMMOND AND CO., CHARING CROSS, S.W., LONDON.

AN OUTLINE OF

THE OBJECTS OF THE STATISTICAL SOCIETY.

THE *Statistical Society* of London was founded, in pursuance of a recommendation of the British Association for the Advancement of Science, on the 15th of March, 1834; its object being, the careful collection, arrangement, discussion and publication, of facts bearing on and illustrating the complex relations of modern society in its social, economical, and political aspects,—especially facts which can be stated numerically and arranged in tables;—and also, to form a Statistical Library as rapidly as its funds would permit.

The Society from its inception has steadily progressed. It now possesses a valuable Library and a Reading Room; ordinary meetings are held monthly from November to June, which are well attended, and cultivate among its Fellows an active spirit of investigation: the papers read before the Society are, with an abstract of the discussions thereon, published in its *Journal*, which now consists of 42 annual volumes, and forms of itself a valuable library of reference.

The Society has originated and statistically conducted many special inquiries on subjects of economic or social interest, of which the results have been published in the *Journal* or issued separately; the latest instance being the institution of the “Howard Medal” Prize Essay.

To enable the Society to extend its sphere of useful activity, and accomplish in a yet greater degree the various ends indicated, an increase in its numbers and revenue is desirable. With the desired increase in the number of Fellows, the Society will be enabled to publish standard works on Economic Science and Statistics, especially such as are out of print or scarce, and also greatly extend its collection of Foreign works. Such a well-arranged Library for reference, as would result, does not at present exist in England, and is obviously a great *desideratum*.

The Society is cosmopolitan, and consists of Fellows and Honorary Members, forming together a body, at the present time, of more than *eight hundred* Members.

The Annual Subscription to the Society is *Two Guineas*, and at present there is no entrance fee. Fellows may, on joining the Society, or afterwards, compound for all future Annual Subscriptions by a payment of *Twenty Guineas*.

The Fellows of the Society receive gratuitously a copy of each part of the *Journal* as published Quarterly, and have the privilege of purchasing back numbers at a reduced rate. The Library (reference and circulating), and the Reading Room, are open daily, for the convenience of Members.

Nomination Forms and any further information will be furnished, on application to the Assistant Secretary.

CALENDAR FOR SESSION 1879-80.

1879	MON.	TUES.	WED.	THURS.	FRI.	SATUR.	SUN.	1880	MON.	TUES.	WED.	THURS.	FRI.	SATUR.	SUN.
NOV.	...	...	...	...	...	1	2	MAY	...	...	...	...	...	1	2
	3	4	5	6	7	8	9		3	4	5	6	7	8	9
	10	11	12	13	14	15	16		10	11	12	13	14	15	16
	17	18	19	20	21	22	23		17	18	19	20	21	22	23
	24	25	26	27	28	29	30		24	25	26	27	28	29	30
									31	...	...	...	...	...	...
DEC.	1	2	3	4	5	6	7	JUNE	...	1	2	3	4	5	6
	8	9	10	11	12	13	14		7	8	9	10	11	12	13
	15	16	17	18	19	20	21		14	15	16	17	18	19	20
	22	23	24	25	26	27	28		21	22	23	24	25	26	27
	29	30	31	...	...	...	...		28	29	30	...	...	...	...
1880								JULY	...	...	...	1	2	3	4
JAN.	...	...	...	1	2	3	4		5	6	7	8	9	10	11
	5	6	7	8	9	10	11		12	13	14	15	16	17	18
	12	13	14	15	16	17	18		19	20	21	22	23	24	25
	19	20	21	22	23	24	25		26	27	28	29	30	31	...
	26	27	28	29	30	31	...								
FEB.	...	...	...	...	...	...	1	AUG.	...	...	...	...	...	...	1
	2	3	4	5	6	7	8		2	3	4	5	6	7	8
	9	10	11	12	13	14	15		9	10	11	12	13	14	15
	16	17	18	19	20	21	22		16	17	18	19	20	21	22
	23	24	25	26	27	28	29		23	24	25	26	27	28	29
									30	31	...	...	...	...	...
MAR.	1	2	3	4	5	6	7	SEP.	...	...	1	2	3	4	5
	8	9	10	11	12	13	14		6	7	8	9	10	11	12
	15	16	17	18	19	20	21		13	14	15	16	17	18	19
	22	23	24	25	26	27	28		20	21	22	23	24	25	26
	29	30	31	...	...	...	...		27	28	29	30	...	...	...
APR.	...	...	...	1	2	3	4	OCT.	...	...	...	...	1	2	3
	5	6	7	8	9	10	11		4	5	6	7	8	9	10
	12	13	14	15	16	17	18		11	12	13	14	15	16	17
	19	20	21	22	23	24	25		18	19	20	21	22	23	24
	26	27	28	29	30	...	...		25	26	27	28	29	30	31

The Ordinary Meetings of the Society, at which Papers are read and discussed, are marked in the Calendar above by Black Figures.

The Chair will be taken at 7.45 p.m., precisely.

Visitors may attend the Ordinary Meetings on the introduction of a Fellow.

THE ANNIVERSARY MEETING

WILL BE HELD ON THE 22ND JUNE, 1880, AT 4 P.M.

MONTHLY MEETINGS—SESSION 1879-80.

HELD ON THE

THIRD TUESDAY IN THE MONTHS OF NOVEMBER—JUNE.

(Excepting May.)

Tuesday, Nov. 18.	Tuesday, March 16.
„ Dec. 16.	„ April 20.
„ Jan. 20.	„ May 11.
„ Feb. 17.	„ June 15.

The Council have reason to expect that in the course of the Session the following Papers will, among others, be communicated to the Society :—

The PRESIDENT's Inaugural Address. By THOMAS BRASSEY, Esq., M.P.

“Analysis of M. Soetbeer's work—On the Production of the Precious Metals,—with comments.” By W. T. NEWMARCH, Esq.

“Statistics of Deaths by Suicide among Her Majesty's British Troops from 1862 to 1877.” By WM. H. MILLAR, Esq., late of the Army Medical Department.

“Education and Training of Pauper Children; a continuation of a Paper by Mr. Fletcher on Farm Schools in the Journal of the Statistical Society for 1852.” By Dr. F. J. MOUAT, F.R.C.S.

“A Survey of Offences and Crimes in England and Wales during the last Twenty Years.” By PROFESSOR LEONE LEVI, LL.D.

“Is the Value of Money rising throughout the World? With Remarks on the effects of the condition of Trade upon the Value of Money.” By R. H. PATTERSON, Esq.

“The Strikes of the last Decade.” By G. PHILLIPS BEVAN, Esq.

“A Statistical Chronology of the Plagues and Pestilences of the World.” By C. WALFORD, Esq., F.S.A.

“The Method of Statistics.” By WYNNARD HOOPER, Esq.

“Our National Parliamentary Accounts.” Appendix to Paper read in 1873. By F. P. FELLOWS, Esq.

“Ten Years' Statistics of British Agriculture, 1869-79.” By CAPT. P. G. CRAIGIE.

“Methods of Electing Representatives.” By HENRY R. DROOP, Esq.

HOWARD MEDAL.

The following is the title of the Essay to which the Medal will be awarded in November, 1880. The Essays to be sent in on or before 30th June, 1880.

“ *The Oriental Plague in its Social, Economical, Political, and International Relations ; special reference being made to the labours of Howard on the subject.* ”

The Council have decided to grant the sum of £20 to the writer who may gain the “Howard Medal” in November, 1880.

(*The Medal is of bronze, having on one side a portrait of John Howard, on the other a wheat-sheaf, with suitable inscription.*)

The following are the principal conditions :—

Each Essay to bear a motto, and be accompanied by a sealed letter, marked with the like motto, and containing the name and address of the author ; such letter not to be opened, except in the case of the successful Essay.

No Essay to exceed in length 150 pages (8vo.) of the *Journal of the Statistical Society*.

The Council shall, if they see fit, cause the successful Essay, or an abridgment thereof, to be read at a Meeting of the Statistical Society ; and shall have the right of publishing the Essay in their *Journal* one month before its appearance in any separate independent form ; this right of publication to continue till three months after the award of the Prize.

The President shall place the Medal in the hands of the successful Candidate, at the conclusion of his Annual Address, at the ordinary Meeting in November, when he shall also re-announce the subject of the Prize Essay for the following year.

Competition for this Medal shall not be limited to the Fellows of the Statistical Society, but shall be open to any competitor, providing the Essay be written in the English language.

The Council shall not award the Prize, except to the author of an Essay, in their opinion, of a sufficient standard of merit ; no Essay shall be deemed to be of sufficient merit that does not set forth the facts with which it deals, in part, at least, in the language of figures and tables ; and distinct references should be made to such authorities as may be quoted or referred to.

Further particulars or explanations may be obtained from the Assistant Secretary, at the Office of the Society, King’s College Entrance, Strand, London, W.C.

LIST OF THE FORMER
Patron and Presidents
 OF THE
STATISTICAL SOCIETY,

From its Foundation, on 15th March, 1834.

Patron.

Period.

1840-61—HIS ROYAL HIGHNESS THE PRINCE CONSORT, K.G.

Presidents.

1834-36	The Most Noble the Marquis of Lansdowne, F.R.S.
1836-38	Sir Charles Lemon, Bart., M.P., F.R.S., LL.D.
1838-40	The Right Hon. the Earl Fitzwilliam, F.R.S.
1840-42	The Right Hon. the Viscount Sandon, M.P. (now Earl of Harrowby.)
1842-43	The Most Noble the Marquis of Lansdowne, K.G., F.R.S.
1843-45	The Right Hon. the Viscount Ashley, M.P. (now Earl of Shaftesbury.)
1845-47	The Right Hon. the Lord Monteagle.
1847-49	The Right Hon. the Earl Fitzwilliam, F.R.S.
1849-51	The Right Hon. the Earl of Harrowby.
1851-53	The Right Hon. the Lord Overstone.
1853-55	The Right Hon. the Earl Fitzwilliam, K.G., F.R.S.
1855-57	The Right Hon. the Earl of Harrowby, F.R.S.
1857-59	The Right Hon. the Lord Stanley, M.P. (now Earl of Derby.)
1859-61	The Right Hon. the Lord John Russell, M.P., F.R.S. (afterwards Earl Russell.)
1861-63	The Right Hon. Sir J. S. Pakington, Bart., M.P., G.C.B. (now Lord Hampton.)
1863-65	Colonel W. H. Sykes, M.P., F.R.S.
1865-67	The Right Hon. the Lord Houghton.
1867-69	The Right Hon. W. E. Gladstone, M.P., D.C.L.
1869-71	W. Newmarch, Esq., F.R.S., Corr. Mem. Inst. of France.
1871-73	William Farr, Esq., M.D., D.C.L., F.R.S.
1873-75	William A. Guy, Esq., M.B., F.R.S.
1875-77	James Heywood, Esq., M.A., F.R.S., F.G.S.
1877-79	George John Shaw-Lefevre, Esq., M.P.

LIST OF FELLOWS.

*Those marked thus * have compounded for their Annual Subscriptions.*

The names of Members of Council are printed in SMALL CAPITALS.

Year of Election.	
1878	Abdur Rahman, Moulvie Syud, 5, <i>Hare-court, Temple, E.C.</i>
1876	Abrahams, Israel, F.R.G.S., 56, <i>Russell-square, W.C.</i>
1870	Absolon, Eugene, 24, <i>Royal Avenue, King's-road, Chelsea, S.W.</i>
1862	Acland, Henry Wentworth, M.D., F.R.S., <i>Oxford.</i>
1869	Acland, Sir Thomas Dyke, Bart., M.P., F.R.S., <i>Spydoncote, Exeter; and Athenæum Club, S.W.</i>
1879	Adam, Robert (<i>City Chamberlain</i>), <i>City Chambers, Edinburgh.</i>
1876	Adams, Josiah Oake, F.R.C.S., <i>Brooke House, Clapton, E.</i>
1867	Addison, John, 6, <i>Delahay-street, Great George-street, S.W.</i>
1873	*Airlie, The Right Hon. the Earl of, K.T., <i>Airlie Lodge, Camden Hill, W.</i>
1877	Airey, Hubert, M.D., <i>Edensor, 3, Kidbrook-grove, Blackheath, S.E.</i>
1876	Aitchison, William John, 2, <i>Princes-street, E.C.</i>
1879	Akers-Douglas, Aretas, J.P., <i>Chilston Park, Maidstone, Kent.</i>
1841	Aldam, William, F.R.S., <i>Frickley Hall, Doncaster.</i>
1876	Aldwinckle, Thomas Williams, 7, <i>East India-avenue, Leadenhall-street, E.C.</i>
1847	Alexander, George William, <i>The Willows, Church-street, Stoke Newington, N.</i>
1872	Alexander, Robert Henry, 9, <i>Birchin-lane, E.C.</i>
1876	Allen, John T. R., <i>North Bailey, Durham.</i>

Year of
Election.

- 1875 Allen, Joseph,
St. Mildred's House, Poultry, E.C.
- 1877 Allen, Joseph, (*Deputy Town Clerk*),
Halifax.
- 1871 Allport, James Joseph,
Littleover, near Derby.
- 1877 Althaus, Julius, M.D.,
36, Bryanston-street, Portman-square, W.
- 1878 Anderson, A. F.,
131, Mount Pleasant, Liverpool.
- 1878 Anderson, Edward C., M.A., M.B.,
Clyde Villa, Coatham, Redcar.
- 1871 Anderson, Sir James, F.R.G.S., F.G.S.,
66, Old Broad-street, E.C.
- 1871 Angus, R. B.,
Montreal, Canada.
- 1834 *Ansell, Charles, F.R.S.,
92, Cheapside, E.C.
- 1872 *Archibald, William Frederick A., M.A.,
3, Amersham-road, Putney, S.W.
- 1874 Arlidge, John Thomas, M.D., F.R.C.P.,
Newcastle, Staffordshire.
- 1854 Ashworth, Henry,
The Oaks, Turton, near Bolton, Lancashire.
- 1871 Atkinson, George W.,
1, Regent-street, Barnsley.
- 1870 Avery, Thomas,
Church-road, Edgbaston, Birmingham.
- 1871 Axon, William E. A.,
Bank Cottage, Patricroft, Manchester.
- 1872 *BABBAGE, MAJOR-GENERAL HENRY P.,
Dainton House, Bromley, Kent.
- 1872 *Backhouse, Edmund, M.P.,
Middleton Lodge, Richmond, York.; Reform Club, S.W.
- 1875 Baddeley, Samuel,
Freeland's-road, Bromley, Kent.
- 1879 Baden-Powell, George S., M.A., F.R.A.S.,
8, St. George's-place, Hyde Park Corner, S.W.
- 1855 BAILEY, ARTHUR HUTCHESON, F.I.A.,
7, Royal Exchange, E.C.
- 1873 Bain, William P., M.D.,
15, Brunswick-street, Blackwall, E.
- 1858 Baines, Edward,
St. Ann's-hill, Burley, Leeds.
- 1879 Baker, W. Mills,
Stoke Bishop, near Bristol.

Year of Election.	
1878	Balfour, Arthur James, M.P., 4, <i>Carlton-gardens, S.W.</i>
1879	Balfour, Cecil Charles, 7, <i>Park-square, Regent's-park, N.W.</i>
1848	Balfour, General Sir George, M.P., D.L., K.C.B., 6, <i>Cleveland-gardens, Bayswater, W.</i>
1873	Balfour, Jabez Spencer, 20, <i>Budge-row, Cannon-street, E.C.</i>
1865	BALFOUR, THOMAS GRAHAM, M.D., F.R.S., <i>Coombe Lodge, Wimbledon Park, S.W.</i>
1879	Bamber, Edward Fisher, C.E., 67, <i>Shaftesbury-road, Ravenscourt-park, W.</i>
1849	Bampton, James, 13, <i>St. James's-square, S.W.</i>
1877	Barbour, William B., 196, <i>Haverstock-hill, N.W.</i>
1875	Barclay, Thomas, Ph.D., 22, <i>Rue Vivienne, Paris.</i>
1873	Barham, Francis F., <i>Bank of England, Birmingham.</i>
1878	Barr, John Coleman, L.R.C.P., <i>Cranmore Villas, Aldershot.</i>
1878	Barry, Francis Tress, <i>St. Leonard's-hill, Windsor.</i>
1879	Barry, Frederick W., M.D., <i>Linton Court, Settle, Yorkshire.</i>
1877	Barton, Edwin W., L.R.C.P., <i>Market Rasen, Lincolnshire.</i>
1872	*Bass, Michael Arthur, M.P., 101, <i>Eaton-square, S.W.; Rangemore, Burton-on-Trent.</i>
1836	Bass, Michael Thomas, M.P., 101, <i>Eaton-square, S.W.; Rangemore, Burton-on-Trent.</i>
1873	Bate, George, 10, <i>City-road, E.C.</i>
1877	BATEMAN, A. E., 1, <i>Whitehall, S.W.</i>
1877	Battye, Richard Fawcett, M.R.C.P., 123, <i>St. George's-road, S.W.</i>
1876	Baxter, Robert, 5 and 6, <i>Victoria-street, Westminster, S.W.</i>
1877	Bayfield, Arthur, 32, <i>Temple-row, Birmingham.</i>
1873	*Baynes, Alfred Henry, F.R.G.S., 19, <i>Castle-street, Holborn, E.C.</i>
1871	*Baynes, William Wilberforce, F.I.A., 32, <i>Moorgate-street, E.C.</i>
1877	Beadel, William J., <i>Springfield Lyons, Chelmsford.</i>
1875	*Beardsall, Francis E. M., 64, <i>Cross-street, Manchester.</i>

Year of Election.	
1878	*Beauchamp, The Right Hon. Earl, 13, <i>Belgrave-square, S.W.</i>
1875	*Beaufort, William Morris, F.R.A.S., F.R.G.S., &c., 18, <i>Piccadilly, W.</i>
1863	Beddoe, John, B.A., M.D., F.R.S., 2, <i>Lansdowne-place, Clifton.</i>
1872	*Bedford, His Grace, the Duke of, <i>Woburn Abbey, Oakley, Bedford.</i>
1871	*Beer, Julius Paul, 27, <i>Portland-place, W.</i>
1879	Beggs, Thomas, <i>Hazeldene, Shortlands, Kent.</i>
1878	Bellew, The Right Hon. Lord, <i>Barneath, Dunleer, Ireland.</i>
1834	Belper, The Right Honourable Lord, P.C., F.R.S., 75, <i>Eaton-square, S.W.</i>
1856	*Beresford-Hope, Alexander James Beresford, M.P., D.C.L., 1, <i>Connaught-place, W.</i>
1879	Bevan, George Phillips, <i>Uplands, Richmond, Surrey.</i>
1875	Bevan, Thomas, J.P., <i>Stone Park, near Dartford, Kent.</i>
1869	*Beverley, Henry, 27, <i>Theatre-road, Calcutta.</i>
1879	*Bickford-Smith, W., J.P., D.L., &c., <i>Trevarno, Helston, Cornwall.</i>
1866	Bikélas, Démétrius, <i>Athens, Greece.</i>
1877	Bishop, George Houlton, M.R.C.S., <i>Female Lock Hospital, Harrow-road, W.</i>
1864	Blakely, Edward T., <i>Statistical Department, Board of Trade, S.W.</i>
1874	Blyth, James Nisbet, 28, <i>Highbury-place, N.</i>
1877	Boddy, Evan Marlett, L.R.C.P., 111, <i>Camberwell-road, S.E.</i>
1873	Bogie, James, 5, <i>Spence-street, Newington, Edinburgh.</i>
1860	Bohn, Henry George, F.R.A.S., F.L.S., 18, <i>Henrietta-street, Covent Garden, W.C.; Twickenham.</i>
1877	Bolam, Harry George, <i>Little Ingestre, Stafford.</i>
1879	Borchardt, Louis, M.D., <i>Swinton House, Fallowfield, Manchester.</i>
1879	Bordman, Thomas Joseph Clarence Linden, <i>Victoria House, Trinity-street, Southwark, E.C.</i>
1875	Borthwick, The Right Hon. Lord, <i>Ravenstone, Whithorn, N.B.</i>
1871	BOURNE, STEPHEN, <i>H.M. Custom House, E.C.; Abberley, Wallington, Surrey.</i>

Year of Election.	
1877	Boutcher, Emanuel, 12, <i>Oxford-square, Hyde Park, W.</i>
1860	Bovill, William John, Q.C., 32, <i>James-street, Buckingham-gate, S.W.</i>
1876	Bowen, Horace George, <i>Bank of England, Burlington-gardens, W.</i>
1879	Bowley, Edwin, <i>Burnt Ash-hill, Lee, Kent.</i>
1874	BRABROOK, EDWARD WILLIAM, F.S.A., M.R.S.L., 28, <i>Abingdon-street, S.W.</i>
1875	Braby, James, J.P., <i>Maybanks, Rudgwick, Sussex.</i>
1874	Bramley-Moore, John, D.L., <i>Gerrard's-cross, Bucks.</i>
1855	Brand, The Right Hon. Henry Bouverie William, M.P., <i>Speaker's Court, House of Commons, S.W.</i>
1873	BRASSEY, THOMAS, M.P. (President), 4, <i>Great George-street, S.W.</i> ; and 24, <i>Park-lane, W.</i>
1864	*Braye, the Right Hon. the Lord, 3, <i>Nevern-road, South Kensington, S.W.</i>
1872	Brind, Frederick William, <i>The Court Lodge, Chelsfield, by Chislehurst, Kent.</i>
1876	Brodhurst, Bernard Edward, F.R.C.S., 20, <i>Grosvenor-street, Grosvenor-square, W.</i>
1874	Broom, Andrew, 104, <i>Grove-lane, Camberwell.</i>
1878	Brown, Alexander Hargreaves, M.P., 12, <i>Grosvenor-gardens, S.W.</i>
1872	Brown, James Bryce, F.R.G.S., 90, <i>Cannon-street, E.C.</i> ; and <i>Bromley, Kent.</i>
1873	Browne, Edward W., <i>Sussex House, Knock, Belfast.</i>
1875	Browne, Thomas Gillespie C., 11, <i>Lombard-street, E.C.</i>
1876	Bruton, Leonard, <i>St. Stephen's Buildings, Bristol.</i>
1865	Bunce, John Thackray, " <i>Daily Post</i> " Office, <i>Birmingham.</i>
1873	*Burdett-Coutts, The Right Hon. the Baroness, 1, <i>Stratton-street, Piccadilly, W.</i> ; and <i>Holly Lodge, Highgate, N.</i>
1872	Burns, The Rev. Dawson, M.A., 52, <i>Parliament-street, S.W.</i>
1874	Burr, William, 42, <i>Poultry, E.C.</i>
1877	Burrell, Alexander, 255, <i>Oxford-circus, W.</i>

Year of Election.	
1857	CAIRD, JAMES, C.B., F.R.S., 3, <i>St. James's-square, S.W.</i> ; and <i>Cassencarie, Kirkcudbrightshire.</i>
1879	Campbell, Lord Colin. M.P., <i>Argyll Lodge, Kensington, W.</i> , and <i>Inverary Castle.</i>
1874	Campbell, Sir George, M.P., K.C.S.I., D.C.L., 13, <i>Cornwall-gardens, South Kensington, S.W.</i>
1877	Campbell, George Lamb, <i>Market-street, Wigan.</i>
1879	Campbell-Colquhoun, Rev. John Erskine, <i>Chartwell, Westerham, Kent.</i>
1862	Cape, George A., 8, <i>Old Jewry, E.C.</i>
1872	*Carillon, J. Wilson, F.S.A., F.R.G.S., <i>Wormhill, Buxton.</i>
1871	Carnac, Harry Rivett-, <i>Calcutta, Bengal, India.</i>
1876	Carphin, James Rhind, C.A., 137, <i>George-street, Edinburgh.</i>
1877	Carter, E. Harold, 33, <i>Waterloo-street, Birmingham.</i>
1875	Carter, Frederick Hayne, 5, <i>St. Andrew-square, Edinburgh.</i>
1848	Carter, John Bonham, 25, <i>Ashley-place, Victoria-street, S.W.</i>
1878	*Casley, Reginald Kennedy, M.D., <i>Northgate-street, Ipswich.</i>
1858	Chadwick, David, M.P., <i>The Poplars, Herne Hill, Dulwich, S.E.</i>
1834	Chadwick, Edwin, C.B., <i>Park Cottage, East Sheen, Mortlake, S.W.</i>
1869	CHADWICK, JOHN OLDFIELD, F.R.G.S., 2, <i>Moorgate-street, E.C.</i>
1875	Challen, George Caleb, <i>St. Mildred's House, Poultry, E.C.</i>
1877	Chandler, George, 15, <i>Coleman-street, E.C.</i>
1873	Charlesworth, Frederic, <i>Widmore, Bromley, Kent.</i>
1863	Charlton, W. H., <i>Hesleyside, near Hexham, Northumberland.</i>
1873	Charrington, Thomas, <i>Mayfield, Chislehurst, Kent.</i>
1851	*Cheshire, Edward, 3, <i>Vanbrugh Park, Blackheath, S.E.</i>
1877	Child, Robert Carlyle, 8, <i>Belsize-park, N.W.</i>
1853	Chisholm, David, F.I.A., 64, <i>Princes-street, Edinburgh.</i>
1862	Christie, Chancellor Richard Copley, M.A., 2, <i>St. James's-square, Manchester</i>

Year of Election.	
1869	CHUBB, HAMMOND, B.A., (<i>Secretary</i>), <i>Bickley, Kent.</i>
1877	Clapham, Crochley, L.R.C.P., <i>Muriel House, Peak Hill, Sydenham, S.E.</i>
1849	Clark, Gordon Wyatt, <i>Mickleham Hall, near Dorking, Surrey.</i>
1856	Clark, Sir John Forbes, Bart., <i>Tillypronie, Tarland, Aberdeen.</i>
1871	Clarke, Ebenezer, jun., <i>52, Cannon-street, E.C.</i>
1877	*Clarke, Henry, L.R.C.P., <i>H.M. Prison, Wakefield, Yorks.</i>
1876	Clarke, Henry Harcourt Hyde, <i>32, St. George's-square, S.W.</i>
1856	*CLARKE, HYDE, <i>32, St. George's-square, S.W.</i>
1869	Cleghorn, John, <i>3, Spring-gardens, S.W.</i>
1850	*Cleveland, His Grace the Duke of, K.G., <i>17, St. James's-square, S.W.</i>
1853	Clirehugh, William Palin, F.I.A., <i>158, Leadenhall-street, E.C.</i>
1877	Cobb, B. Francis, <i>79, Cornhill, E.C.</i>
1873	Cockle, Captain George, F.R.G.S., <i>9, Bolton-gardens, South Kensington, S.W.</i>
1877	COHEN, LIONEL LOUIS, <i>9, Hyde Park-Terrace, W.</i>
1838	Colebrooke, Sir Thomas Edward, Bart., M.P., <i>14, South-street, W.</i>
1859	Coles, John, F.I.A., <i>39, Throgmorton-street, E.C.</i>
1879	Collings, Jesse, J.P., &c., <i>King Edward's-road, Birmingham.</i>
1874	Collins, Eugene, M.P., <i>38, Porchester-terrace, Hyde Park, W.</i>
1877	Collins, J. Wright, J.P., <i>Stanley, Falkland Islands.</i>
1874	Collinson, John, F.R.G.S., <i>37, Porchester-terrace, Hyde Park, W.</i>
1867	Colman, Jeremiah James, M.P., <i>Carrow House, Norwich.</i>
1878	Colomb, Captain J.C.R., R.M.A., J.P., <i>Dronmquinnae, Kenmare, Kerry.</i>
1879	Cooke, H. Ribton, <i>27, Fenchurch-street, E.C.</i>
1879	Cooke, Isaac B., <i>19, Brown's-buildings, Liverpool.</i>
1874	*Cookson, Faithful, F.R.G.S., <i>39, Cannon-place, Brighton.</i>

Year of Election.	
1879	Cooper, William John, 7, <i>Westminster-chambers, Victoria-street, S.W.</i>
1843	*Copperthwaite, William Charles, <i>New Malton, Yorkshire.</i>
1874	Corbett, John, M.P., 6A, <i>Waterloo-place, Pall Mall, S.W.</i>
1873	Cork, Nathaniel, F.R.G.S., 39, <i>Lombard-street, E.C.</i>
1878	Cornish, William Robert, F.R.C.S. (<i>Surgeon Major</i>), <i>Sanitary Commissioner, Madras.</i>
1862	Courtney, Leonard Henry, M.A., M.P., 15, <i>Queen Anne's Gate, Westminster, S.W.</i>
1873	Cowper, The Hon. Henry Frederick, M.P., 4, <i>St. James's-square, S.W.</i>
1857	*Cowper-Temple, The Right Hon. William Francis, M.P., 15, <i>Great Stanhope-street, W.</i>
1874	CRAIGIE, CAPTAIN PATRICK GEORGE, <i>Hartley House, Lower Heath, Hampstead, N.W.</i>
1870	Craik, George Lillie, 29, <i>Bedford-street, Strand, W.C.</i>
1872	Crellin, Philip, 33, <i>Chancery-lane, W.C.</i>
1878	Crewdson, Ernest, 5, <i>Norfolk-street, Manchester.</i>
1878	Crickmay, Herbert John, <i>Bank of England, E.C.</i>
1879	Crisford, George Samuel, F.I.A., <i>West of England Insurance Company, Exeter.</i>
1876	Crosse, John Burton St. Croix, F.R.C.S., <i>Royal Military Asylum, Chelsea, S.W.</i>
1878	Crossman, James H., J.P., <i>Union Club, Trafalgar-square, S.W.</i>
1877	Crothers, Robert, M.D., M.R.C.P., 2, <i>Warrior-square-terrace, St. Leonard's-on-Sea.</i>
1875	Crowe, William Russell, <i>Stanley House, Carshalton, Surrey.</i>
1879	Cunningham, Charles L., M.R.C.S., &c.
1875	Cunningham, David, C.E., <i>Works' Office, Harbour-chambers, Dundee.</i>
1879	Curtis, Robert Leabon, 15 and 16, <i>Blomfield-street, E.C.</i>
1848	Cutcliffe, George, F.I.A., 13, <i>St. James's-square, S.W.</i>
1873	Czarnikow, Cæsar, <i>Mitcham, Surrey.</i>

Year of Election.	
1869	Dalyell, The Hon. Robert Anstruther, C.S.I., <i>India Office, Westminster, S.W.</i>
1873	DANVERS, JULAND, <i>India Office, Westminster, S.W.</i>
1869	Davies, James Mair, <i>65, West Regent-street, Glasgow.</i>
1874	Davies, William Henry, <i>51, Tregunter-road, S.W.</i>
1878	Davis, James, <i>31, Charing-cross, S.W.</i>
1855	*Dawbarn, William, <i>Elmswood Hall, Aigburth, Liverpool.</i>
1873	Dawson, James Thomas, <i>79, Cornhill, E.C.</i>
1876	Day, William Ansell, <i>Lyndhurst House, Hendon, N.W.</i>
1879	*De Ferrieres, The Baron Du Bois, J.P. <i>Bay's-hill House, Cheltenham.</i>
1873	Delahunty, James, M.P. <i>2, Savile-row, W.</i>
1877	Deloitte, William Welch, <i>4, Lothbury, E.C.</i>
1873	Dent, Clinton Thomas, F.R.C.S. <i>29, Chesham-street, S.W.</i>
1873	Dent, Edward, <i>Fernacres, Fulmer, near Slough, Bucks.</i>
1878	Dent, W. T., <i>Elderbrook, Osbaldwick, York.</i>
1855	*DERBY, THE RIGHT HONOURABLE THE EARL OF, P.C., F.R.S., (<i>Honorary Vice-President</i>), <i>23, St. James's-square; and Knowsley, Prescott, Lancashire.</i>
1877	Dever, Henry, <i>4, Lothbury, E.C.</i>
1866	*Dilke, Sir Charles Wentworth, Bart., M.P., LL.M., <i>76, Sloane-street, S.W.</i>
1873	Dixon, George, <i>The Dales, Edgbaston, Birmingham.</i>
1876	Dowden, Major Thomas Freeman, R.E., <i>71, Old Broad Street, E.C.</i>
1877	Downs, Henry, <i>Manor House, Basingstoke.</i>
1875	Doxsey, Rev. Isaac, <i>The Grove, Camberwell, S.E.</i>
1878	Doyle, Patrick, C. E., <i>O'Brien Villa, 21, North-road, Entally, Calcutta.</i>
1875	Drimmie, David, <i>41, Lower Sackville-street, Dublin.</i>
1872	Droop, Henry Richmond, <i>1a, New-square, Lincoln's-inn, W.C.</i>

Year of Election.	
1878	Duignan, William Henry, <i>Walsall, Staffordshire.</i>
1875	Dun, John, <i>Parr's Banking Company, Limited, Warrington.</i>
1870	Duncan, James, <i>9, Mincing-lane, E.C.</i>
1878	*Dunraven, The Right Hon. Earl of, K.P., <i>Kenry House, Putney Vale, S.W.</i>
1875	Dyer, Sir Swinnerton Halliday, Bart., J.P., <i>Westcroft Lodge, Bagshot, Surrey.</i>
1836	Edmonds, Thomas Rowe, B.A., <i>72, Portsdown-road, Maida-vale, W.</i>
1869	Edmonds, William, <i>Annesley House, Southsea.</i>
1875	Edwards, Samuel, <i>4, Eliot Park, Lewisham, S.E.</i>
1872	Elliot, Sir George, Bart., M.P., <i>Park-street, Park-lane, W.</i>
1874	Elliot, Robert, M.D., F.R.C.P., <i>35, Lowther-street, Carlisle.</i>
1842	Elliott, John Hawkins, <i>4, Martin's-lane, E.C.</i>
1877	Ellis, Arthur, <i>11, Park-villas, Crouch-end, N.</i>
1873	Ellissen, Adolf, <i>28, Maida-hill West, W.</i>
1873	Elsey, John Green, J.P., <i>Morant House, Addison-road, Kensington, W.</i>
1873	Emanuel, Lewis, <i>36, Finsbury-circus, E.C.</i>
1877	Emmott, W. T., <i>Albert Park, Didsbury.</i>
1879	Evans, Henry Jones, J.P., <i>Brecon Old Bank, Cardiff.</i>
1862	Evens, John Henry, <i>9, Finsbury-place, E.C.</i>
1875	Everett, The Hon. H. Sidney, M.A., <i>United States Legation, 4, Alsenstrasse, Berlin.</i>
1834	Eversley, The Right Honourable Viscount, D.C.L., LL.D., <i>114, Eaton-square, S.W.; and Winchfield, Hants.</i>
1875	Faraday, Frederick J., <i>17, Brazenose-street, Manchester.</i>

Year of Election.	
1874	Farmer, James, 6, <i>Porchester-gate, Hyde Park, W.</i>
1839	FARR, WILLIAM, M.D., D.C.L., F.R.S., (<i>Honorary Vice-President</i>), <i>General Register Office ; and Southlands, Bickley, 1.</i>
1868	Farrell, John Douglas, <i>Bank of England, West Branch, Burlington-garden</i>
1878	Farren, George, M.I.C.E., <i>Carnarvon.</i>
1878	Farrer, Thomas Henry, 11, <i>Bryanston-square, W.</i>
1876	Fearnside, Henry, M.B., F.R.C.P., 49, <i>Leinster-gardens, Bayswater, W.</i>
1864	Fellows, Frank P., 8, <i>The Green, Hampstead, N.W.</i>
1874	Ferguson, A.M., “ <i>Ceylon Observer</i> ” <i>Office, Colombo, Ceylon.</i>
1877	Ferrier, John, <i>Rossllyn House, New Barnet, Herts.</i>
1834	Finch, John, <i>Heathside, Tunbridge Wells.</i>
1873	Fisher, Henry, 38, <i>New Broad-street, E.C.</i>
1875	FitzGeorge, Owen, 36, <i>Cornhill, E.C.</i>
1879	Fitzwilliams, Edward Crompton Lloyd, <i>Adpar Hill, Newcastle Emlyn, Carmarthen, S. 1</i>
1878	Follett, Charles John, M.A., B.C.L., <i>H.M. Custom House, E.C.</i>
1875	Fordham, Edward King, J.P., <i>The Bury, Ashwell, Baldock, Herts.</i>
1841	Fortescue, The Right Honourable Earl, <i>Castle Hill, South Molton, Devon.</i>
1871	Forwood, William Bower, <i>Ramlet, Blundellsands, Liverpool.</i>
1877	*Fowler, Alderman Robert Nicholas, 50, <i>Cornhill, E.C. ; and Elm Grove, Corsham, Wilts.</i>
1868	Fowler, William, 33, <i>Cornhill, E.C.</i>
1878	Foxwell, Herbert S., M.A., <i>St. John's College, Cambridge.</i>
1879	Francis, George Edward, <i>Staunton Coleford, Gloucestershire.</i>
1878	Frankland, Frederick William, <i>Registrar-General's Office, Wellington, New Zealand.</i>
1844	*Freeland, Humphrey William, J.P., <i>Athenæum Club, S.W. ; and Chichester.</i>
1876	Freeman, Joseph, <i>Burwood Lodge, West Brixton, S.W.</i>

Year of
Election

- 1876 Freeman, T. Kyffin,
- 1878 Fuller, W. Palmer,
50, *Gresham-street, E.C.*
- 1875 Gair, Alexander,
17, *Change-alley, E.C.*
- 1879 Gairdner, Charles,
Broom, Newton Mearns, Renfrewshire.
- 1852 Galsworthy, Edwin Henry, J.P., F.I.A.,
18, *Upper Wimpole-street, W.*
- 1873 *Galton, Capt. Douglas, R.E., C.B., F.R.S.,
12, *Chester-street, Grosvenor-place, S.W.*
- 1860 Galton, Francis, F.R.S., F.R.G.S.,
42, *Rutland-gate, S.W.*
- 1878 Gardiner, Clement,
8, *Small-street, Bristol.*
- 1878 Gardiner, Henry J.,
Hurstmead, Eltham, Kent.
- 1879 *Gassiot, John Peter, J.P.,
The Culvers, Carshalton, Surrey,
- 1872 Gastrell, Major-General J. E.,
7, *Lansdowne-road, Wimbledon, S.W.*
- 1874 Gatlift, Charles,
8, *Finsbury-circus, E.C.*
- 1877 Gawith, Richard Jackson, M.R.C.S.,
23, *Westbourne-park-terrace, Paddington, W.*
- 1872 Gibb, Thomas Eccleston,
16, *Lady Margaret-road, N.W.*
- 1874 Gibbs, Alban George Henry,
82, *Portland-place, W.*
- 1871 Gibbs, George Sleight,
Darlington.
- 1867 *GIFFEN, ROBERT, (*Secretary and Editor of the Journal*),
44, *Pembroke-road, Kensington, W.*
- 1877 Gilbert, William H. Sainsbury,
9, *Old Jewry, E.C.*
- 1878 *Glanville, S. Goring,
238, *Lewisham High-road, S.E.*
- 1860 Glover, John, (*Merton Lodge, West-hill, Highgate, N.W.*)
22, *Great St. Helen's, Bishopsgate-street, E.C.*
- 1877 Goddard, Frederick Robertson,
19, *Victoria-square, Newcastle-on-Tyne.*
- 1877 Good, Alfred, (7, *Poultry, E.C.*),
91, *Highbury Hill, N.*
- 1868 Göschen, The Right Hon. George Joachim, M.P.,
69, *Portland-place, W.*

Year of Election.	
1855	*Gosset, John Jackson, <i>Thames Ditton, Surrey.</i>
1873	Gouly, Edward James, <i>Bullion Office, Bank of England, E.C.</i>
1853	Gover, William Sutton, F.I.A., <i>4, Queen-street-place, Southwark Bridge, E.C.</i>
1876	Grahame, James, C.A., <i>12, St. Vincent-place, Glasgow.</i>
1879	Grant, Daniel, <i>12, Cleveland-gardens, Bayswater, W.</i>
1875	Granville, Joseph Mortimer, M.D., F.G.S., &c., <i>Scientific Club, 7, Savile-row, W.</i>
1847	Gray, Thomas, <i>34, Fenchurch-street, E.C.</i>
1878	Green, Thomas Bowden, M.A., F.R.S.L., F.R.H.S., &c., <i>7, New-road, Oxford.</i>
1877	Greene, William Thomas, M.A., M.D., <i>Moirs House, Peckham Rye, S.E.</i>
1868	Griffith, Edward Clifton, <i>31, St. James's-square, S.W.</i>
1872	Griffiths, John George, <i>4, Lothbury, E.C.</i>
1875	Gunn, Arthur, <i>Metropolitan Board of Works, Spring-gardens, S.W.</i>
1860	Gurney, Daniel, <i>North Runcton, near King's Lynn, Norfolk.</i>
1878	Guthrie, Charles, <i>88, Cannon-street, E.C.</i>
1877	Gutteridge, Richard Sandon, M.D., <i>58, Brook-street, Grosvenor-square, W.</i>
1839	GUY, WILLIAM AUGUSTUS, M.B., F.R.C.P., F.R.S., (Honorary Vice-President), <i>12, Gordon-street, Gordon-square, W.C.</i>
1873	*Haggard, Frederick T., <i>Eltham Court-road, Eltham, Kent.</i>
1876	Hall, Edward Algernon, <i>20, Clarges-street, W.</i>
1876	Hall, Edward Hepple, <i>73, Elm-park, Brixton-hill, S.W.</i>
1869	Hall, James Macalester, <i>Killean House, Tayinloan, Argyleshire.</i>
1878	Hallett, T.G.P., M.A., <i>Claverton Lodge, Bath.</i>
1860	Hamilton, Archibald, J.P., <i>South Barrow, Bromley, Kent.</i>

Year of Election.	
1873	HAMILTON, Lord George Francis, M.P., 17, <i>Montagu-street, Portman-square, W.</i>
1879	HAMILTON, Rowland, <i>Oriental Club, Hanover-square, W.</i>
1841	HAMPTON, THE RIGHT HON. LORD, G.C.B., D.C.L. (<i>Honorary Vice-President</i>), 9, <i>Eaton-square, S.W.</i> ; and <i>Westwood-park Droitwich.</i>
1873	HANBURY, Robert William, M.P., <i>Ilam Hall, Ashbourne, Derbyshire.</i>
1869	HANCOCK, William, 33, <i>Cornhill, E.C.</i>
1879	HANCOCK, William Neilson, LL.D., M.R.I.A., 64, <i>Upper Gardiner-street, Dublin.</i>
1875	HANKEY, Ernest Alers, <i>Elmhurst, Bickley-park, Kent.</i>
1837	*HANKEY, John Alexander, J.P., <i>Balcombe-place, Cuckfield, Sussex.</i>
1879	HANKEY, Thomson, M.P., 59, <i>Portland-place, W.</i>
1861	HANNYNGTON, Major-General John Caulfield, F.I.A., <i>India Office, Westminster, S.W.</i>
1876	HANSARD, Luke, 68, <i>Lombard-street, E.C.</i>
1871	HARCOURT, Sir William Vernon, Q.C., M.P., 7, <i>Grafton-street, Bond-street, W.</i>
1877	HARDING, Charles, M.R.S.L., F.R.G.S., 7, <i>Bank Buildings, E.C.</i>
1877	HAROLD, Frederick Richard, 12, <i>Landseer-road, Upper Holloway, N.</i>
1878	HARPER, W. P., 3, <i>Newman's-court, Cornhill, E.C.</i>
1868	HARRIS, David, <i>Caroline Park, Granton, Edinburgh.</i>
1879	HARRIS, Frederick, 62, <i>Gracechurch-street, E.C.</i>
1868	HARRISON, John, 85, <i>Northgate, Darlington.</i>
1834	HARROWBY, THE RIGHT HON. THE EARL OF, K.G., D.C.L., F.R.S., (<i>Honorary Vice-President</i>), 39, <i>Grosvenor-square, W.</i>
1870	HARTLEY, Fountain John, <i>Gloucester House, 97, Gazonove-road, Upper Clapton, N.</i>
1876	HAWKINS, Alfred Templeton, F.R.G.S., 35, <i>Spring-gardens, Charing-cross, S.W.</i>
1879	HAWKSLEY, Thomas, C.E., F.R.S., &c., 30, <i>Great George-street, Westminster, S.W.</i>
1873	HAY, James Lamb Napier, <i>Queen Insurance Company, Calcutta.</i>
1877	HEDLEY, Thomas Fenwick, 12, <i>Park-place, West, Sunderland.</i>

Year of Election.	
1870	Hefford, George V., <i>Rugby.</i>
1860	Helder, Stewart, F.I.A., 2, <i>Broad Sanctuary, S.W.</i>
1865	Hendriks, Augustus, F.I.A., 7, <i>Cornhill, E.C.</i>
1855	*HENDRIKS, FREDERICK, 1, <i>King William-street, E.C.</i>
1858	Herapath, Spencer, F.G.S., 18, <i>Upper Phillimore-gardens, W.</i>
1877	*Herbage, William, <i>London & South Western Bank, 7, Fenchurch-street, E.C.</i>
1874	Hertz, James, 124, <i>Cannon-street, E.C.</i>
1834	*HEYWOOD, JAMES, M.A., F.R.S., F.G.S., (<i>Honorary Vice-President and Trustee</i>), 26, <i>Palace-gardens, Kensington, W.; Athenæum Club, S.W.</i>
1869	Hickson, Joseph, J.P., <i>Montreal, Canada.</i>
1875	Higham, Charles Daniel, F.I.A., 3, <i>Princes-street, Bank, E.C.</i>
1878	Hill, Frederick Morley, 22, <i>Richmond-road, Barnsbury, N.</i>
1873	Hime, Capt. H. W. L., R.A., <i>Sheffield.</i>
1859	Hincks, His Excellency, Sir Francis, <i>Montreal, Canada.</i>
1879	Hoare, Hamilton Noel, 37, <i>Fleet-street, E.C.</i>
1870	*Hoare, Henry, <i>Staplehurst, Kent.</i>
1834	*Hodge, William Barwick, F.I.A., 5, <i>Whitehall, S.W.</i>
1867	Hodgson, Professor W. B., LL.D., <i>Bonaly Tower, Colinton, by Edinburgh.</i>
1873	Hogg, Colonel Sir James McGarel, Bart., M.P., 17, <i>Grosvenor-gardens, S.W.</i>
1877	Holden, Isaac, 64, <i>Cross-street, Manchester.</i>
1877	Holmes, Richard Henry, <i>Elswick-villa, Rye Hill, Newcastle-on-Tyne.</i>
1874	Hood, Charles, F.R.S., F.R.A.S., 10, <i>Leinster-gardens, Hyde-park, W.</i>
1871	Hooper, Angus Cameron, <i>Montreal, Canada.</i>
1874	Hooper, George D., <i>Belmont Lodge, Oxford-road, Chiswick, W.</i>
1879	Hooper, George Norgate, <i>Elmleigh, Hayne-road, Beckenham, Kent.</i>

Year of Election.	
1878	Hooper, Wynnard, 2, <i>Pembroke-gardens, Kensington, W.</i>
1855	HOUGHTON, THE RIGHT HON. LORD, D.C.L. F.R.S., (<i>Honorary Vice-President</i>), <i>Fryston Hall, Ferrybridge, Yorkshire.</i>
1876	Hoyle, William, <i>Claremont, Tottington, near Bury, Lancaster.</i>
1872	Hubbard, Egerton J., M.P., 4, <i>St. Helen's-place, Bishopsgate-street, E.C.</i>
1853	*Hubbard, The Right Hon. John Gellibrand, M.P., <i>Bank of England, E.C.</i>
1864	Hudson, Thomas, <i>Argof Villa, St. Andrew's Park, Bristol.</i>
1871	Hughes, Albert William, F.R.G.S., <i>Karachi, Sindh, India.</i>
1878	Hughes, John, 3, <i>West-street, Finsbury-circus, E.C.</i>
1872	Humphreys, George, M.A., F.I.A., 79, <i>Pall Mall, S.W.</i>
1874	Humphreys, Noel Algernon, <i>General Register Office, Somerset House, W.C</i>
1873	Hunt, Sir Henry Arthur, C.B., 54, <i>Eccleston-square, S.W.</i>
1857	Hurst, George, <i>King's Brook House, St. Mary's, Bedford.</i>
1877	Huskinson, Thomas, <i>Epperstone Manor, Nottingham.</i>
1879	Hyde, Major-General Henry, R.E., <i>India Office, Westminster, S.W.</i>
1873	Hyndman, Henry Mayer, 10, <i>Devonshire-street, Portland-place, W.</i>
1866	Ince, Henry Bret, 18, <i>Old-square, Lincoln's-inn, W.C.</i>
1869	Ingall, Samuel, F.R.G.S., <i>Kent-end, Forest-hill, Kent, S.E.</i>
1874	*Ingall, William Thomas Fitzherbert Mackenzie, 50, <i>Threadneedle-street, E.C.</i>
1869	*Inglis, Cornelius, M.D., <i>Athenæum Club, S.W.</i>
1839	Irving, John, 94, <i>Eaton-place, S.W.</i>
1878	Isaacs, Michal Babel, 35, <i>Leinster-square, Bayswater, W.</i>
1864	*Ivey, George Pearse, <i>Tyle Morris, Briton Ferry.</i>

Year of Election.	
1879	Jameson, George Auldjo, 58, <i>Melville-street, Edinburgh.</i>
1872	Janson, Frederick Halsey, F.L.S., 41, <i>Finsbury-circus, E.C., and Oak Bank, Chislehurst.</i>
1878	Jeans, James Stephen, 7, <i>Westminster-chambers, Victoria-street, S.W.</i>
1851	*Jellicoe, Charles, F.I.A., 12, <i>Cavendish-place, W.</i>
1879	Jephson, Henry L. (<i>Chief Secretary's Office</i>), <i>Dublin Castle, Ireland.</i>
1862	JEULA, HENRY, F.R.G.S., 29, <i>Gracechurch-street, E.C.</i>
1864	*JEVONS, PROFESSOR W. STANLEY, M.A., LL.D., F.R.S., (<i>Secretary</i>), <i>The Chesnuts, Branch-hill, Hampstead Heath, N.W.</i>
1871	Johnson, Edmund, 3, <i>Castle-street, Holborn, E.C.</i>
1872	Johnston, Francis J., <i>Lamas, Chislehurst.</i>
1878	Johnstone, E., 45, <i>Fleet-street, E.C.</i>
1878	Jones, Alfred Orlando, M.D., F.R.C.S., <i>Belton House, Harrogate.</i>
1878	Jones, Henry R. Bence, 1, <i>Whitehall, S.W.</i>
1874	Jones, Herbert, 15, <i>Montpelier-row, Blackheath, S.E.</i>
1877	Jones, Theodore Brooke, 1, <i>Finsbury-circus, E.C.; Georgeville, Harrogate, Yorks.</i>
1873	Jones, Sir Willoughby, Bart., M.A., <i>Cranmer Hall, Fakenham, Norfolk.</i>
1858	JOURDAN, FRANCIS, <i>Avenue House, Hampstead, N.W.</i>
1877	Karuth, Frank O., <i>Oakhurst, Beckenham, Kent.</i>
1873	Kay, Duncan James, 60, <i>Queen's-gate, S.W.</i>
1877	Kealy, James William, 26, <i>Moorgate-street, E.C.</i>
1874	Kelly, Charles, M.D., <i>Worthing, Sussex.</i>
1867	Kelly, Edward Robert, A.M., 51, <i>Great Queen-street, Lincoln's-inn-fields, W.C.</i>
1878	Kelsey, Joseph Francis, <i>Government Statistician, Mauritius.</i>
1873	Kemp, Samuel, <i>Oriel House, Bath.</i>

Year of Election.	
1878	Kennedy, J. Murray, <i>New University Club, St. James's-street, S.W.</i>
1868	Kennedy, Peter, <i>13, Cornwall-terrace, Regent's-park, N.W.</i>
1878	Kennedy, Thomas, <i>11, Old Jewry-chambers, E.C.</i>
1874	Kennelly, David Joseph, F.R.G.S., F.R.A.S., <i>Devonshire Club, St. James's, S.W.</i>
1852	Kimberley, The Right Honourable the Earl of, M.A., P.C., <i>35, Lowndes-square, S.W.</i>
1878	King-Harman, Edward Robert, M.P., <i>Rockingham, Boyle, Ireland.</i>
1879	Kirkwood, Anderson, LL.D., <i>12, Windsor-terrace West, Hillhead, near Glasgow.</i>
1872	Knight, John Peake, <i>London, Brighton, & S. Coast Rail., London Bridge, E.C.</i>
1865	Kühner, Henry, (c/o Messrs. Kühner, Hendschel & Co.), <i>145, Cannon-street, E.C.,</i>
1878	*Kusaka, Yoshio, <i>7, Elgin-crescent, Notting-hill, W.</i>
1869	Kyshe, John Benjamin, <i>Registrar General Mauritius.</i>
1873	Lack, H. Reader, (<i>Office of Commissioners of Patents</i>), <i>25, Southampton-buildings, E.C.</i>
1877	Lane, Cecil N., <i>King's Bromley Manor, Lichfield.</i>
1875	Lane, Thomas, <i>Percy Cottage, Eastbourne.</i>
1874	Lang, George Murray, R.N., <i>18, Cheyne-walk, Chelsea, S.W.</i>
1878	Law, The Right Hon. Hugh, M.P., <i>9, Fitzwilliam-square, Dublin.</i>
1874	Lawes, John Bennett, F.R.S., F.C.S., <i>Rothamsted, St. Albans.</i>
1877	Lawrance, Henry, <i>58, Euston-square, N.W.</i>
1878	Lawrence, Alexander M., <i>17, Thurlow-road, Hampstead, N.W.</i>
1873	Lawrie, James, F.R.G.S., <i>Kelvin House, Quadrant-road, Highbury, N.</i>
1873	Lawson, Robert, <i>20, Lansdowne-road, Notting-hill, W.</i>
1873	Lea, Thomas, M.P., <i>14, Elvaston-place, Queen's-gate, S.W.</i>
1879	*Leete, Joseph, <i>36, St. Mary-at-hill, E.C. (Eversden, S. Norwood Park).</i>

Year of Election.	
1877	LEFEVRE, GEORGE SHAW, M.P., (<i>Honorary Vice-President</i>), 18, <i>Bryanston-square, W.</i>
1877	*Leggatt, Daniel, LL.D., 55, <i>Lincoln's-inn-fields, W.C.</i>
1870	Leitch, John Muir, 18, <i>King William-street, E.C.</i>
1873	Leslie, Francis Seymour,
1851	LEVI, PROFESSOR LEONE, LL.D., F.S.A., 5, <i>Crown Office-row, Temple, E.C.</i>
1879	Levison, David, 2, <i>Royal Exchange-buildings, E.C.</i>
1867	Lewis, Charles Edward, M.P., 8, <i>Old Jewry, E.C.</i>
1877	Lewis, John, 1, <i>Temple-row West, Birmingham.</i>
1862	Lewis, Robert, 1, <i>Bartholomew-lane, E.C.</i>
1877	Ligertwood, Thomas, M.D., F.R.C.S., <i>Royal Hospital, Chelsea, S.W.</i>
1868	Lissa, Joseph J. Cohen de, F.R.G.S., F.M.S., 43, <i>Church-street, Port Louis, Mauritius.</i>
1845	*Iister, William,
1834	Lloyd, John Horatio, 100, <i>Lancaster-gate, Hyde-park, W.</i>
1878	Lloyd, Thomas, 4, <i>Huddlestons-road, Tufnell-park, N.</i>
1879	Lloyd, Wilson, F.R.G.S., <i>Myvods House, Wood-green, Wednesbury.</i>
1876	Lord, James, F.S.A., 1, <i>Whitehall-gardens, S.W.</i>
1876	*Lornie, John, <i>Rosemount, Kirkcaldy.</i>
1834	Lovelace, The Right Honourable the Earl of, F.R.S., <i>East Horsley Park, Ripley, Surrey.</i>
1879	Lowndes, William Layton, J.P., D.L., <i>Linley Hall, Broseley, Shropshire.</i>
1875	Loyd, William Jones, J.P., 16, <i>Grosvenor-place, S.W., and Langleybury, Watford.</i>
1865	LUBBOCK, SIR JOHN, BART., M.P., F.R.S., (<i>Trustee</i>), <i>High Elms, Farnborough, Kent.</i>
1878	Lucas, Thomas, J.P., 5, <i>Great George-street, Westminster, S.W.</i>
1878	Lusk, Sir Andrew, Bart., J.P., 16, <i>Hyde-park-street, W.</i>
1879	Lyall, J. Watson,

Year of Election.	
1875	Mabson, Richard Rouse, <i>Ilford, Essex.</i>
1873	*Macandrew, William, J.P., <i>Westwood, near Colchester.</i>
1873	McArthur, Alexander, M.P., <i>Raleigh Hall, Brixton, S.W.</i>
1873	McArthur, Alderman William, M.P., F.R.G.S., <i>1, Gwydyr Houses, Brixton Rise, S.W.</i>
1879	MacCarthy, Rev. E. F. M., M.A., <i>47, Hagley-road, Edgbaston, Birmingham.</i>
1878	McCheane, Robert, <i>90, Palace-gardens-terrace, W.</i>
1879	McCheane, Robert, junr., <i>90, Palace-gardens-terrace, W.</i>
1867	M'Clean, Frank, <i>23, Great George-street, Westminster, S.W.</i>
1879	McCrea, H. C., J.P., <i>Warley House, Halifax.</i>
1873	McDermott, Edward, <i>Hill Side, Grove-park, Camberwell, S.E.</i>
1868	*Macdonald, James, <i>7, Lothbury, E.C.</i>
1872	Macdonell, John, (3, Elm-court, Temple, E.C.), <i>The Myrtles, Beckenham, Kent.</i>
1873	*McEwen, Laurence T. (c/o R. A. McLean), <i>8, Old Jewry, E.C.</i>
1856	MacGillivray, Donald, F.I.A., <i>54, Moorgate-street, E.C.</i>
1879	MacIver, David, M.P., <i>34, Lancaster-gate, W.</i>
1871	Mackay, James Macgregor, <i>32, Brunswick-square, Brighton.</i>
1876	McKenna, Sir Joseph N., M.P., <i>67, Lancaster-gate, W.</i>
1871	Mackeson, Charles, <i>The Admiralty, New-street, Spring-gardens, S.W.</i>
1878	McKewan, William, <i>21, Lombard-street, E.C.</i>
1870	MacLagan, David, <i>22, George-street, Edinburgh.</i>
1876	*McLean, Robert Allan, F.R.G.S., <i>8, Old Jewry, E.C.</i>
1874	Macleod, The Right Hon. Sir John Macpherson, K.C.S.I., <i>1, Stanhope-street, Hyde Park, W.</i>
1863	*Maclure, J. W., J.P., &c., <i>Carlton Club; The Home, Whalley Range, Manchester.</i>
1875	Macpherson, Hugh Martin, F.R.C.S., (Inspector-General), <i>14, St. James's-square, S.W.</i>
1871	Malgarini, Frederick Lewis, F.R.S.E.,

Year of Election.	
1879	Man, Edward Garnet (<i>Barrister-at-Law</i>), 4, <i>Lamb-buildings, Temple, E.C., and Rangoon.</i>
1878	Manuel, R. A., (<i>Rangoon</i>), c/o Messrs. Trübner and Co., <i>Ludgate-hill, E.C.</i>
1877	*Maple, John Blundell, 8, <i>Clarence-terrace, Regent's-park, N.W.</i>
1874	Markham, Clements R., C.B., F.R.S., F.R.G.S., 21, <i>Eccleston-square, S.W.</i>
1875	Marsh, Alfred, 85, <i>Gracechurch-street, E.C.</i>
1860	Marsh, Matthew Henry, <i>Bamridge, near Andover, Hants.</i>
1865	Martin, Frederick, 7, <i>Fortess-terrace, Junction-road, N.W.</i>
1873	Martin, Henry, <i>National Bank of India, 39a, Threadneedle-street, E.C.</i>
1874	*MARTIN, JOHN BIDDULPH, M.A., F.Z.S., 6B, <i>The Albany, Piccadilly, W.</i>
1877	Martin, Josiah, F.I.A., 32, <i>New Bridge-street, E.C.</i>
1872	*MARTIN, RICHARD BIDDULPH, M.A., (<i>Treasurer</i>), <i>Chislehurst.</i>
1876	Martin, Thomas Jaques, <i>Colonial Life Assurance Company, Melbourne, Victoria.</i>
1879	Martin, Waldyve A. Hamilton, 14, <i>Manson-place, Queen's-gate, S.W.</i>
1875	*Mathers, John Shackleton, <i>Hanover House, Leeds, Yorkshire.</i>
1878	Maughan, Joseph Henry, A.I.S., 9, <i>New-street, Great Grimsby.</i>
1870	Maxse, Rear-Admiral Frederick A., <i>The Chesnuts, Wimbledon Common, S.W.</i>
1874	May, Frank, <i>Bank of England, Threadneedle-street, E.C.</i>
1853	*Meikle, James, F.I.A., 6, <i>St. Andrew's-square, Edinburgh.</i>
1878	Meldon, Charles Henry, M.P., Q.C., LL.D., 107, <i>Jermyn-street, S.W.</i>
1878	Merrick, Alfred Benjamin, 6, <i>Cotham-parade, Bristol.</i>
1861	Messent, John, F.I.A., 429, <i>West Strand, W.C.</i>
1877	Metcalfe, Richard, <i>Gräefenberg House, New Barnet, Herts.</i>
1877	Michael, William H., 1, <i>Park Prospect, St. James's-park, S.W.</i>
1875	Mildmay, Henry Bingham, J P., 8, <i>Bishopsgate-street Within, E.C.</i>
1873	Millar, William Henry, <i>Cleveland Lodge, New Park-road, Brixton-hill, S.W.</i>

Year of Election.	
1877	Miller, Robert Ferguson, <i>Exchange-place, Middlesbro'-on-Tees.</i>
1879	Miller, William, 65, <i>Lancaster-gate, W. (67, Queen Victoria-street, E.C.)</i>
1878	Mills, Sir Charles Henry, Bart., M.P., <i>Camelford House, Park-lane, W.</i>
1878	Mitchell, James, J.P., 33, <i>Ennismore-gardens, S.W.</i>
1877	Mitchell, Joseph Thomas, M.R.C.S., 206, <i>South Lambeth-road, S.W.</i>
1874	*Mocatta, Frederick D., F.R.G.S., 9, <i>Connaught-place, W.</i>
1878	Moffat, Robert J., <i>The Chesnuts, Great Shelford, Cambridgeshire.</i>
1879	Moore, Alfred, C.E., 5, <i>Clarence-street, Manchester.</i>
1874	Moore, Charles Rendall, 5, <i>Cowper's-court, Cornhill, E.C.</i>
1877	Moore, Edward, 3, <i>Crosby-square, E.C.</i>
1878	*Moore, John Byers Gunning, <i>Loymount, Cookstown, Ireland.</i>
1874	Moore, Sandford, M.B., <i>South Camp, Aldershot.</i>
1872	Morgan, Octavius Vaughan, J.P., 13, <i>Boltons, South Kensington, S.W.</i>
1873	*Morley, Samuel, M.P., 18, <i>Wood-street, E.C.</i> ; 16, <i>Upper Brook-street, W.</i>
1874	*Morris, James, M.D., F.R.C.S., 13, <i>Somers-place, Hyde-park-square, W.</i>
1874	Morris, John, 6, <i>Old Jewry, E.C.</i>
1877	Mort, William, 1, <i>Stanley-crescent, Notting-hill, W.</i>
1873	Morton, James, <i>Balclutha, Greenock, N.B.</i>
1847	*MOUAT, FREDERIC J., M.D., F.R.C.S., (<i>Vice-President and Foreign Secretary</i>), 12, <i>Durham-villas, Kensington, W.</i>
1878	Muir, Hugh Brown, 26, <i>Old Broad-street, E.C.</i>
1877	Mullen, Robert Gordon, <i>Fairview, Widmore-road, Bromley, Kent.</i>
1878	*MUNDELLA, ANTHONY JOHN, M.P., (<i>Vice-President</i>), 16, <i>Elvaston-place, Queens-gate, S.W.</i>
1878	Murray, Adam, 104, <i>King-street, Manchester.</i>
1879	Murray, James Charles, 15, <i>Moorgate-street, E.C.</i>

Year of Election.	
1879	Nalder, Francis Henry, <i>Findern Lodge, Spring-grove, Isleworth.</i>
1865	Nasmith, David, <i>4, Garden-court, Temple, E.C.</i>
1878	Nathan, Henry, <i>110, Portsdown-road, Maida-vale, N.</i>
1879	Neil, William M., <i>64, Seymour-street, Portman-square, W.</i>
1854	Neild, Alfred, <i>Mayfield, Manchester.</i>
1869	NEISON, FRANCIS G. P., <i>93, Adelaide-road, South Hampstead, N.W.</i>
1879	Nepean, Evan Colville, <i>War Office, Pall Mall, S.W.</i>
1877	Nevill, Charles Henry, <i>11, Queen Victoria-street, E.C.</i>
1862	Newbatt, Benjamin, F.I.A., F.R.G.S., <i>13, St. James's-square, S.W.</i>
1879	Newdegate, Charles Newdigate, M.P., D.C.L., <i>27, Lowndes-street, Belgrave-square, S.W.</i>
1877	Newington, Samuel, M.A., <i>Ticehurst, Sussex.</i>
1847	*NEWMARCH, WILLIAM, F.R.S., F.I.A., <i>(Trustee and Honorary Vice-President), Beech Holme, Nightingale-lane, Clapham-common, S.W.</i>
1869	Newmarch, William T., A.A., Oxon, <i>67, Lombard-street, E.C.</i>
1878	Newport, Henry R., <i>1, Whitehall, S.W.</i>
1878	Newton, John, <i>66, Oakfield-road, Penge, S.E.</i>
1878	Nicholson, J. S., <i>Trinity College, Cambridge.</i>
1858	Nightingale, Miss Florence, <i>10, South-street, Park-lane, W.</i>
1877	Nix, Samuel Dyer, <i>3, King-street, Cheapside, E.C.</i>
1871	*Noble, Benjamin, <i>North-Eastern Bank, Newcastle-on-Tyne</i>
1870	Noble, John, <i>45, Mornington-road, Regent's-park, N.W.</i>
1834	Norman, George Warde, J.P., <i>Bromley, Kent.</i>
1877	Norman, General, Sir Henry Wylie, K.C.B., <i>16, Westbourne-square, W.</i>
1878	Northbrook, The Right Hon. the Earl of, G.C.S.I., D.C.I., <i>4, Hamilton-place, Piccadilly, W.</i>
1878	Notthafft, Theodor, <i>c/o Discount Bank, St. Petersburg.</i>

Year of Election.	
1862	Ogbourne, Charles Henry, 29, <i>Dalhousie-square, Calcutta.</i>
1877	Ogle, William Slingsby, 90, <i>Cannon-street, E.C.</i>
1878	O'Hagan, The Right Hon. Lord, 19, <i>Chesham-place, S.W.</i>
1878	Oppenheim, Henry, 17, <i>Park-lane, Piccadilly, W.</i>
1876	Orange, William, M.D., <i>Broadmoor, Wokingham, Berks.</i>
1877	Ormond, Richard, <i>Belgrave-terrace, Newcastle-on-Tyne.</i>
1874	Overall, William Henry, F.S.A., <i>Librarian, Guildhall, E.C. (Representing the Library Committee of the Corporation of the City of London.)</i>
1834	*OVERSTONE, THE RIGHT HONOURABLE LORD, F.R.G.S., (<i>Honorary Vice-President</i>), 2, <i>Carlton-gardens, S.W.</i>
1866	*Palgrave, Robert Harry Inglis, J.P., 11, <i>Britannia-terrace, Great Yarmouth, Norfolk.</i>
1879	Palmer, George, M.P., 13, <i>Clarges-street, Piccadilly, W.</i>
1878	Park, David Francis, C.A., F.F.A., A.I.A., 17, <i>Change-alley, Cornhill, E.C.</i>
1878	Parry, Thomas, <i>Grafton-place, Ashton-under-Lyne.</i>
1879	Partridge, Henry Francis, L.D.S., &c., <i>Sussex House, Sussex-place, South Kensington, S.W.</i>
1869	PATTERSON, ROBERT HOGARTH, 22, <i>Wingate-road, Hammersmith, W.</i>
1877	Paul, Henry Moncreiff, 12, <i>Lansdowne-crescent, Notting Hill, W.</i>
1878	Paulin, David, 31, <i>Stafford-street, Edinburgh.</i>
1879	Payn, Howard, 21, <i>Gilbert-street, Grosvenor-square, W.</i>
1877	Payne, William Percy, 136, <i>Mansfield-road, Nottingham.</i>
1873	Pearce, Charles William, <i>Devon House, Acre-lane, S.W.</i>
1876	Pearson, Edwin James, <i>Board of Trade, Whitehall, S.W.</i>
1857	*Pearson, Professor C. H. (c/o John Pearson, Q.C.), 75, <i>Onslow-square, S.W.</i>

Year of Election.	
1876	*Peek, Sir Henry William, Bart., M.P., <i>Wimbledon House, S.W.</i>
1878	Pellereau, His Honour, Etienne, <i>Puisne Judge of H.M. Supreme Court, Mauritius.</i>
1871	Pennington, Frederick, M.P., <i>17, Hyde Park-terrace, W.</i>
1874	Pepys, The Hon. George,
1874	Phené, John Samuel, F.R.G.S., F.S.A., &c., <i>5, Carlton-terrace, Oakley-street, S.W.</i>
1879	Philips, Herbert, <i>35, Church-street, Manchester.</i>
1877	Phillipps, Henry Matthews, <i>41, Seething-lane, E.C.</i>
1835	*Phillips, Sir George Richard, Bart., <i>22, Hill-street, Berkeley-square, W.</i>
1859	Phillips, Henry James, <i>4, Ludgate-hill, E.C.</i>
1877	Phillips, John Walter, M.B., L.R.C.S., <i>30, Stanley-street, West Melbourne, Victoria.</i>
1878	Phipps, Pickering, M.P., <i>6, Collingtree Grange, Northampton.</i>
1871	*Pickering, John, F.R.G.S., F.S.A., <i>The Abnalls, Mount Preston, Leeds.</i>
1873	Pickstone, William, <i>Maesmynan Hall, Holywell.</i>
1878	*Pim, Joseph Todhunter, <i>Greenbank, Monkstown, County Dublin.</i>
1838	*Pinckard, George Henry, J.P., F.I.A., <i>12, Grove-road, St. John's-wood, N.W.</i>
1879	Pixley, Francis William, <i>Road Club, 4, Park-place, St. James's, S.W.</i>
1861	Plowden, W. Chicele (Commissioner 1st Division), <i>Meeruth District, Mussoorie, N.W.P.</i>
1869	Pochin, Henry Davis, <i>Bodnant Hall, Conway.</i>
1874	Ponsonby, The Hon. Frederick George Brabazon, M.P., <i>3, Mount-street, Grosvenor-square, W.</i>
1879	Poole, William, <i>Newton Avenue, Longsight, Manchester.</i>
1860	Potter, Edmund, F.R.S., <i>64, Queen's-gate, South Kensington, S.W.</i>
1879	Powell, Francis Sharp, F.R.G.S., <i>1, Cambridge-square, Hyde Park, W.</i>
1871	Power, Edward, <i>16, Southwell-gardens, Kensington, W.</i>
1877	*Prance, Reginald Heber, <i>Frognaal, Hampstead, N.W.</i>
1877	Praschkauer, Maximilian, <i>Swiss Cottage, Herne Hill, S.E.</i>

Year of Election.	
1867	*Pratt, Robert Lindsay, 80, <i>Bondgate, Darlington.</i>
1877	Preen, Harvey Edward, <i>Kidderminster.</i>
1849	Presant, John, 13, <i>St. James's-square, S.W.</i>
1879	Price, James, F.R.G.S., 8, <i>Howley-place, Maida Hill West, W.</i>
1874	Price, John Charles, <i>Compton Cottage, Maryon-road, Old Charlton, Kent, S.E.</i>
1871	Puleston, John Henry, M.P., <i>Westminster Palace Hotel, S.W.</i>
1837	*PURDY, FREDERICK, (Vice-President), 35, <i>Victoria-road, Kensington, W.</i>
1879	Quail, Jesse, 60, <i>White Rock-street, Liverpool, E.</i>
1874	Quain, Richard, M.D., F.R.S., F.R.C.P., 67, <i>Harley-street, W.</i>
1872	*Rabino, Joseph, (care of Baron J. Vitta), 8, <i>Rue Lafont, Lyons.</i>
1858	*Radstock, The Right Honourable Lord, <i>East Sheen, Mortlake, S.W.</i>
1877	Raikes, Captain George Alfred, 63, <i>Belsize-park, Hampstead, N.W.</i>
1864	*Raleigh, Samuel, 9, <i>St. Andrew-square, Edinburgh.</i>
1860	Ramsay, Alexander Gillespie, F.I.A., <i>Canada Life Assurance, Hamilton, Canada West.</i>
1874	Ramsden, Sir James, of Barrow, D.L., <i>Furness Abbey, Lancashire.</i>
1879	Ranken, William Bayne, 37, <i>Stanhope-gardens, Queen's Gate, S.W.</i>
1865	Ratcliff, Charles, <i>Athenæum Club, S.W.; and Wyddrington, Birmingham.</i>
1859	Rathbone, P. H., <i>Greenbank Cottage, Liverpool.</i>
1878	Rathbone, William, M.P., 18, <i>Prince's-gardens, Prince's-gate, S.W.</i>
1874	*RAVENSTEIN, ERNEST GEORGE, F.R.G.S., 10, <i>Lorn-road, Brixton, S.W.</i>

Year of Election.	
1877	*Rawlins, Thomas, 45, <i>King William-street, E.C.</i>
1870	Rawlinson, Robert, C.B., 11, <i>Boltons, West Brompton, S.W.</i>
1835	RAWSON, SIR RAWSON WILLIAM, C.B., K.C.M.G., (<i>Vice-President</i>), <i>Drayton House, West Drayton, Uxbridge, Middlesex.</i>
1875	Record, John, 23, <i>Kenninghall-road, Clapton, E.</i>
1856	Redgrave, Alexander, C.B., <i>Factory Inspectors' Office, Whitehall, S.W.</i>
1867	Reid, Herbert Lloyd, 4, <i>Glebe-villas, Mitcham.</i>
1862	Reynolds, Frederick, <i>c/o London Institution, Finsbury Circus, E.C.</i>
1879	Rhodes, John G., <i>Oakdene, Beckenham, Kent.</i>
1876	Rice, Thomas Fitzroy, <i>Horseheads, New York, U.S.A.</i>
1878	Richards, George, L.R.C.P., Edin., <i>Mervyn Lodge, Ashfields, Ross, Herefordshire.</i>
1879	Richardson, George Gibson, J.P., <i>Oak Lawn, Reigate.</i>
1873	Ripon, The Most Hon. the Marquess of, K.G., F.R.S. &c., 1, <i>Carlton-gardens, S.W.</i>
1868	Robinson, Sir William Rose, K.C.S.I., 28, <i>Cambridge-square, Hyde-park, W.</i>
1873	*Rosebery, The Right Hon. the Earl of, 107, <i>Piccadilly, W.</i>
1834	*Ross, David, of Bladensburg, <i>Rostrevor, Co. Down, Ireland.</i>
1865	Ruck, George T., <i>The Hawthorns, Dorville-road, Lee, S.E.</i>
1878	Rumley, George Chisnall, 2, <i>Forres-street, Edinburgh.</i>
1879	Runtz, John, <i>Linton Lodge, Lordship-road, Stoke Newington, N.</i>
1878	Russell, Richard F., 8, <i>John-street, Adelphi, W.C.</i>
1874	Rutherford, Charles, 29, <i>St. Swithin's-lane, E.C.</i>
1873	*Salisbury, The Most Hon. the Marquess of, P.C., F.R.S., 20, <i>Arlington-street, W.</i>
1875	*Salomons, Sir David Lionel, Bart., J.P., <i>Broom-hill, Tunbridge Wells.</i>

Year of Election.	
1876	Salt, Thomas, M.P., <i>Local Government Board, Whitehall, S.W.</i>
1868	Samuelson, Bernhard, M.P., <i>56, Prince's-gate, Hyde-park, S.W.</i>
1860	Sargant, William Lucas, <i>Edgbaston, Birmingham.</i>
1877	Saunders, Charles Edward, M.D., <i>21, Lower Seymour-street, Portman-square, W.</i>
1874	Saunders, Francis, <i>6, Limes-grove, Lewisham, S.E.</i>
1852	Saunders, James Ebenezer, jun., F.G.S. <i>9, Finsbury-circus, E.C.</i>
1879	Saunders, William, <i>Mount View, Streatham, S.W.</i>
1869	Sayle, Philip, F.R.H.S., <i>4, St. Paul's Church-yard, E.C.</i>
1877	Schiff, Charles <i>36, Sackville-street, Piccadilly, W.</i>
1877	Schneidau, Charles John, <i>6, Westwick-gardens, West Kensington-park, W.</i>
1878	Scott, Arthur J., <i>22, Grafton-street, New Bond-street, W.</i>
1875	Scott, Edward Henry, J.P., <i>27, Grosvenor-square, W.</i>
1879	Scott, Russell, <i>The Manor House, Eastbourne.</i>
1869	SEYD, ERNEST, <i>38, Lombard-street, E.C.</i>
1873	Seyd, Richard, <i>38, Lombard-street, E.C.</i>
1841	SHAFTESBURY, THE RIGHT HON. THE EARL OF, K.G., <i>(Honorary Vice-President), 24, Grosvenor-square, W.</i>
1879	Shepherd, Wallwyn Poyer B., M.A., <i>24, Old Buildings, Lincoln's Inn, W.C.</i>
1871	Sidgwick, Henry, <i>Trinity College, Cambridge.</i>
1878	Simmonds, G. H., <i>1, Whitehall, S.W.</i>
1850	Singer, Charles Douglas, <i>9, The Terrace, Upper Clapton, E.</i>
1877	Skeats, Herbert S., <i>2, Serjeant's-inn, Fleet-street, E.C.</i>
1878	*Slaughter, Mihill, <i>42, Binfield-road, Clapham, S.W.</i>
1877	Sloley, Robert Hugh, <i>121, Bishopsgate-street Within, E.C.</i>
1869	Smee, Alfred Hutcheson, M.R.C.S., <i>7, Finsbury-circus, E.C.</i>

Year of Election.	
1878	*Smith, Charles, M.R.I.A., F.G.S., Assoc. Inst. C.E., <i>Barrow-in-Furness.</i>
1874	Smith, Edward, <i>St. Mildred's House, Poultry, E.C.</i>
1871	Smith, E. Cozens, <i>1, Old Broad-street, E.C.</i>
1878	*Smith, George, LL.D., C.I.E., <i>Serampore House, Napier-road, Edinburgh.</i>
1877	Smith, Howard S., <i>37, Bennett's Hill, Birmingham.</i>
1878	Smith, James, <i>South Indian Railway, Negapatam, Madras.</i>
1877	Smith, John, <i>8, Old Jewry, E.C.</i>
1879	Smith, J. Fisher, <i>76, Cheapside, E.C.</i>
1873	Smith, Col. John Thomas, R.E., F.R.S., F.I.A., <i>10, Gledhow Gardens, Wetherby-road, S. Kensington, S.W.</i>
1867	*Smith, The Right Honourable William Henry, M.P., <i>Admiralty, Whitehall, S.W.</i>
1878	Souter, John Clement, M.D., F.C.S.,
1855	Sowray, John Russell, <i>Office of Woods, 1, Whitehall-place, S.W.</i>
1877	Spalding, Samuel, <i>South Darent, Kent.</i>
1873	Spence, John Berger, <i>31, Lombard-street, E.C.</i>
1867	*Spencer, Robert James, <i>High-street, Portsmouth.</i>
1876	Spensley, Howard, <i>Thatched House Club, St. James's-street, S.W.</i>
1874	Spicer, James, J.P., <i>Harts, Woodford, Essex.</i>
1856	*Sprague, Thomas Bond, M.A., F.I.A., <i>26, St. Andrew-square, Edinburgh.</i>
1872	Spriggs, Joseph, <i>Dale Cottage, Foxton, near Market Harbro'.</i>
1856	*Stainton, Henry Tibbats, <i>Mountsfield, Lewisham, S.E.</i>
1877	Stanford, Edward, <i>55, Charing Cross, S.W.</i>
1877	Staples, Sir Nathaniel Alexander, Bart., <i>Lissan, Cookstown, Tyrone.</i>
1870	Stark, William Emery, <i>Trinity Cottage, Birchfield-road, Birmingham.</i>
1877	Startin, James, M.R.C.S., <i>17, Sackville-street, W.</i>
1877	Stone, William A., <i>90, Cannon-street, E.C.; West Hill Lodge, Dartford, Kent.</i>

Year of Election.	
1855	*Stott, John, F.I.A., 3, <i>Charlton-park-terrace, Old Charlton, Kent.</i>
1865	Strachan, Thomas Young, F.I.A., 18, <i>Grainger-street West, Newcastle-on-Tyne.</i>
1872	Strachey, General Richard, R.E., F.R.S., <i>India Office, Westminster, S.W.</i>
1878	Stubbins, Thomas K., <i>Market-street, Bradford, Yorks.</i>
1873	Tait, Lawson, F.R.C.S., 7, <i>Great Charles-street, Birmingham.</i>
1859	*Tait, Patrick Macnaghten, 39, <i>Belsize Park, N.W.; and Oriental Club, W.</i>
1877	Tatham, George Henry,
1879	Tayler, Mrs. N., 28, <i>Park-street, Grosvenor-square, W.</i>
1877	Taylor, John E., <i>Coppins, Iver, Uxbridge.</i>
1873	Taylor, Peter Alfred, M.P., 22, <i>Ashley-place, Westminster, S.W.</i>
1838	*Taylor, General Pringle, K.H.,
1878	Thomas, Rev. R. D.,
1879	Thomas, William Angell, <i>King's College, Strand, W.C.</i>
1879	Thomas, W. Cave, 53, <i>Welbeck-street, Cavendish-square, W.</i>
1878	Thompson, Alfred Boyle, M.R.C.S., 18, <i>Serjeant's-inn, Temple, E.C.</i>
1878	Thompson, Captain C. Halford, (late R.A.), 9, <i>Colleton-crescent, Exeter.</i>
1864	*Thompson, Henry Yates, 26a, <i>Bryanston-square, W.</i>
1868	Thomson, James, 35, <i>Nicholas-lane, E.C.</i>
1871	Thomson, Thomas D., 57, <i>Moorgate-street, E.C.</i>
1876	Thornely, William, <i>West Brow, Hampstead, N.W.</i>
1871	Thurlow, The Right Hon. Lord, <i>Dunphail, N.B.; Traveller's Club, Pall Mall, S.W.</i>
1877	Tiddy, Samuel Vesey, 110, <i>Cannon-street, E.C.</i>

Year of Election.	
1879	Tipping, William, <i>Oakfield House, Ashton-under-Lyne.</i>
1855	Tomline, Colonel George, <i>1, Carlton House-terrace, S.W.</i>
1843	Tottie, John William, <i>Coniston Hall, Bell Busk, Leeds.</i>
1868	*Treatt, Frank Burford, <i>Immigration Office, Sydney, N.S. Wales.</i>
1868	Tritton, Joseph Herbert, <i>54, Lombard-street, E.C.</i>
1878	Turnbull, Alexander, <i>118, Belsize-park-gardens, N.W.</i>
1867	Turner, Thomas, <i>Ashley House, Kingsdown, Bristol.</i>
1878	Turton, William Woolley, <i>The Hollies, Bickley, Kent.</i>
1841	Tyndall, William Henry, <i>92, Cheapside, E.C.</i>
1873	Underdown, Robert George, <i>London-road Railway Station, Manchester.</i>
1877	*Urlin, Richard Denny, <i>22, Stafford-terrace, Phillimore-gardens, W.</i>
1842	Valpy, Richard, <i>5, Rutland-gate, S.W.</i>
1868	Vanderbyl, Philip, <i>51, Porchester-terrace, W.</i>
1874	Vian, William John, <i>64, Cornhill, E.C.</i>
1876	Vigers, Robert, <i>4, Frederick's-place, Old Jewry, E.C.</i>
1877	Vine, John Richard Somers, <i>45, St. Paul's-road, Camden-square, N.W.</i>
1873	Vivian, Major Quintus, D.L., F.R.G.S., <i>17, Chesham-street, S.W.</i>
1861	Waddell, James, <i>12, Queen Victoria-street, E.C.</i>
1877	Waddy, Henry Edward, L.R.C.P., M.R.C.S. <i>2, Clarence-street, Gloucester.</i>

Year of Election.	
1873	Wakeford, Henry, <i>Home Office, Whitehall, S.W.</i>
1857	* WALFORD, CORNELIUS, F.I.A., 86, <i>Belsize-park-gardens, N.W.</i>
1871	* Walker, R. Bailey, <i>Massie-street, Cheadle, Cheshire.</i>
1877	Wallington, Charles, 51, <i>Moorgate-street, E.C.</i>
1868	Wallis, Charles, J., 5, <i>Alfred-road, Highgate Hill, N.</i>
1876	Walter, Arthur Fraser, 15, <i>Queen's Gate-terrace, S.W.</i>
1877	Walter, Captain Edward, <i>Commissionaires' Office, 419, Strand, W.C.</i>
1850	Walter, John, M.P., 40, <i>Upper Grosvenor-street, W.</i>
1879	Wansey, Arthur H., <i>Sambourne, Stoke Bishop, Bristol.</i>
1873	Waring, Charles, 19B, <i>Grosvenor-square, S.W.</i>
1865	Waterhouse, Edwin, B.A., 44, <i>Gresham-street, E.C.</i>
1878	Watherston, Edward J., 12, <i>Pall-mall East, S.W.</i>
1874	Watson, James, F.R.G.S., 24, <i>Endsleigh-street, Tavistock-square, W.C.</i>
1873	Watson, J. Forbes, M.A., M.D., LL.D. <i>India Museum, South Kensington, W.</i>
1865	Watson, William West, <i>City Chamberlain, Glasgow.</i>
1865	Webster, Alphonsus, 44, <i>Mecklenburg-square, W.C.</i>
1873	Webster, James Hume, 14, <i>Chapel-street, Park-lane, W.</i>
1869	Weguelin, Christopher, 57½ <i>Old Broad-street, E.C.</i>
1873	Weguelin, Thomas Matthias, M.P., 14, <i>Devonshire-street, Portland-place, W.</i>
1879	Weir, William, 38, <i>South Audley-street, W.</i>
1873	* Welby, Reginald Earle, C.B., <i>The Treasury, Whitehall, S.W.</i>
1879	Welch, John Kemp, J.P., <i>Clock House, Clapham-common, S.W.</i>
1855	Weldon, James Walton, 1, <i>St. James's-square, S.W.</i>
1873	Wellington, His Grace the Duke of, K.G., &c., &c., <i>Apsley House, Piccadilly, W.</i>
1873	Wells, W. Lewis, 66, <i>Old Broad-street, E.C.</i>

Year of Election.	
1855	Welton, Thomas Abercrombie, (5, <i>Moorgate-street, E.C.</i>), 6, <i>Offerton-road, Clapham, S.W.</i>
1879	Wenley, James Adams, <i>Bank of Scotland, Bank-street, Edinburgh.</i>
1876	Westgarth, William, 28, <i>Cornhill, E.C.</i>
1879	*Westlake, John, Q.C., LL.D., 16, <i>Oxford-square, W.</i>
1878	Wharton, James, 10, <i>Buckland-crescent, Belsize-park, N.W.</i>
1836	*Whishaw, James, 32, <i>Harewood-square, N.W.</i>
1859	Whitbread, Samuel, M.P., 10, <i>Ennismore-gardens, Princes-gate, S.W.</i>
1876	Whitcher, John, Jr., F.I.A., 81, <i>King William-street, E.C.</i>
1868	White, James, 8, <i>Thurloe-square, South Kensington, S.W.</i>
1863	White, Leedham, 44, <i>Onslow-gardens, S.W.</i> ; 85, <i>Gracechurch-street, E.C.</i>
1879	White, Robert Owen, J.P., <i>The Priory, Lewisham, S.E.</i>
1871	White, William, 70, <i>Lombard-street, E.C.</i>
1878	Whiteford, William, 4, <i>Elm-court, Temple, E.C.</i>
1873	Whitehead, Jeffery, 39, <i>Throgmorton-street, E.C.</i>
1878	Whitwell, John, M.P., (<i>Bank House, Kendal</i>), 1, <i>Whitehall-gardens, S.W.</i>
1879	*Whitwill, Mark, J.P., <i>Redland House, Durdham-park, Bristol.</i>
1878	Wilcox, William, L.R.O.P. (Edin.), M.R.C.S., <i>Holly House, North Walsham, Norfolk.</i>
1875	Wilkinson, Thomas Read, <i>Manchester and Salford Bank, Manchester.</i>
1860	Willans, John Wrigley, 2, <i>Headingley-terrace, Leeds.</i>
1879	Williams, Edward, <i>Cleveland Lodge, Middlesborough.</i>
1864	Williams, Frederick Bessant, 2, <i>Ludgate Hill, E.C.</i>
1870	Williams, H. R., 3, <i>Lime-street, E.C.</i> ; and <i>Oak Lodge, Highgate, N.</i>
1876	Williams, John Worthey, 5, <i>Marlborough-road, Upper Holloway, N.</i>
1877	Williams, Richard Price, 38, <i>Parliament-street, S.W.</i>
1875	Wilson, Edwards D. J., M.A., <i>Airlie House, The Grove, Camberwell, S.E.</i>

Year of Election.	
1874	* Wilson, Robert Porter, 5, <i>Cumberland-terrace, Regent's-park, N.W.</i>
1878	Wilton, Francis, M.R.C.S., <i>Ticehurst, Sussex.</i>
1872	* Winch, William R., <i>North Mymms Park, Hatfield, Herts.</i>
1868	Wood, H. W. I. (<i>Calcutta</i>), <i>Care of Messrs. Richardson, 13, Pall Mall, S.W.</i>
1873	Woods, Henry, <i>Warnford Park, Bishop's Waltham, Hants.</i>
1838	Woolhouse, Wesley Stoker Barker, F.R.A.S., <i>Alwyne Lodge, Alwyne-road, Canonbury, N.</i>
1874	Woolner, Thomas, R. A., 29, <i>Welbeck-street, Cavendish-square, W.</i>
1877	Worms, Baron Henry de, F.R.A.S., <i>H 2, Albany, Piccadilly, W.</i>
1878	Worsfold, Rev. J. N., M.A., <i>Haddlesey Rectory, near Selby, Yorkshire.</i>
1877	Wright, George, (<i>Clarence House, Ipswich</i>), 131, <i>Bishopsgate-street Without, E.C.</i>
1838	* Wyatt-Edgell, Rev. Edgell, 40, <i>Lower Grosvenor-street, W., and Stanford Hall, Rugby.</i>
1878	Yoshii, Yasuharu, 11, <i>Horbury-crescent, Notting-hill, W.</i>
1872	Yeatman, Morgan, <i>Shawfield, Bromley, Kent.</i>
1879	Yeats, John, LL.D., 7, <i>Beaufort-square, Chepstow.</i>
1879	Yee, Fung, 49, <i>Portland-place, W.</i>
1877	* Youll, John Gibson, <i>Jesmonds-road, Newcastle-on-Tyne.</i>
1849	* Young, Charles Baring, 12, <i>Hyde-park Terrace, W.</i>

* * The Executive Committee request that any inaccuracy in the foregoing list may be pointed out to the ASSISTANT SECRETARY and that all changes of address may be notified to him, so that delay in forwarding communications and the publications of the Society may be avoided.

HONORARY MEMBERS.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.,

Honorary President.

EUROPE.

Austria and Hungary.

- Budapest** M. CHARLES KELETI, *Chef du Bureau Royal Hongrois, de Statistique. Conseiller Ministériel.*
- Vienna** DR. HUGO FRANZ BRACHELLI, *Chef du Bureau de Statistique au Ministère de Commerce.*
- „ S. E. M. le BARON de CZERNIG, *Conseiller intime actuel de S. M. Imp. et Royal.*
- „ DR. ADOLPHE FICKER, *Chef de Division au Ministère des Cultes et de l'Instruction Publique. Président de la Commission Centrale I. et R. de Statistique à Vienne.*
- „ PROFESSOR FR. XAVIER von NEUMANN-SPALLART, D.C.L., *Professor of Political Economy and Statistics, Agricultural College, University of Vienna; Imperial Councilor; Member of the Imperial Statistical Commission; Honorary Member of the Statistical Society of Paris and of the Cobden Club.*
- „ M. MAX WIRTH, *Ancien Chef du Bureau de la Statistique, Suisse.*

Belgium.

- Brussels** SIR HENRY PAGE TURNER BARRON, BART., *Secretary of Legation, British Embassy.*
- „ M. XAVIER HEUSCHLING, *Chef de Division au Ministère de l'Intérieur du Royaume de Belgique, Secrétaire de la Commission Centrale de Statistique.*
- „ M. le DR. E. JANSSENS, *Service d'Hygiène, Inspecteur du Santé de la Ville de Bruxelles, Membre Secrétaire de la Commission Provinciale, et de la Commission Locale de Statistique à Bruxelles.*
- „ M. VICTOR MISSON, *Ancien Président de la Cour des Comptes de Belgique, &c.*

Denmark.

- Copenhagen** PROFESSOR FAJBE HANSEN, *Professor of Political Economy and Statistics in the University of Copenhagen.*
- „ DR. SCHLEISNER, *Medical Officer of Health.*

France.

Paris	M. MAURICE BLOCK.
„	M. ARTHUR CHERVIN, <i>Member of the Statistical Society of Paris; General Secretary of the International Congress of Demography.</i>
„	M. MAXIMIM DELOCHE, <i>Membre de l'Institut, Directeur de la Statistique Générale de la France.</i>
„	M. JOSEPH GARNIER, <i>Membre de l'Institut, Professeur d'Économie Politique à l'École des Ponts et Chaussées, Rédacteur en chef du Journal des Économistes.</i>
„	M. CLEMENT JUGLAR, <i>President Sortant de la Société de Statistique de Paris.</i>
„	M. ALFRED LEGOYT, <i>Ancien Directeur de la Statistique Générale.</i>
„	M. E. LEVASSEUR, <i>Membre de l'Institut, Professeur au Collège de France.</i>
„	M. DE PARIEU, <i>Membre de l'Institut, Ancien Député, Sénateur, et Ministre.</i>
„	M. LE PLAY, <i>Ancien Sénateur.</i>
„	M. le PRÉSIDENT DE LA SOCIÉTÉ DE STATISTIQUE DE PARIS.

Germany.

Bavaria	DR. GEORGE MAYR, <i>Director of the Royal Bureau of Statistics; Ministerialrath und Universitäts Professor.</i>
„	DR. G. CHARLES LEOPOLD SEUFFERT, <i>Chief Inspector and Director of the Royal Custom House at Simbach.</i>
Berlin	DR. CHARLES BECKER, <i>Geheimer oberregierungs-rath. Director des Kaiserll: Statistischen Amts.</i>
„	DR. ERNEST ENGEL, <i>Director of the Royal Statistical Office of Prussia.</i>
Frankfurt	THE PRESIDENT OF THE STATISTICAL SOCIETY OF FRANKFURT.

Great Britain and Ireland.

Dublin	THE PRESIDENT OF THE STATISTICAL AND SOCIAL ENQUIRY SOCIETY OF IRELAND.
Manchester	THE PRESIDENT OF THE MANCHESTER STATISTICAL SOCIETY.

Greece.

Athens	A. MANSOLAS, <i>Chef de Division, Directeur du Bureau de Statistique Hellénique.</i>
---------------------	--

Italy.

- Genoa** PROFESSORE GEROLAMO BOCCARDO, *Senator of the Kingdom of Italy; Knight of Civil Merit, &c., &c.*
- Rome** PROFESSORE LUIGI BODIO, *Directeur de la Statistique Générale d'Italie, et Secrétaire de la Commission Centrale de Statistique.*
- „ PROFESSORE CESARE CONTINI, *Membre de la Société Statistique de Paris. Grand Chevalier de l'ordre de Sa Majesté le Roi d'Italie.*
- „ SIGNOR CESARE CORRENTI, *Membre de la Chambre des Députés; Membre du Conseil d'Etat; Vice-President de la Commission Centrale de Statistique.*
- „ IL MARCHESE AVVOCATO ERMENEGILDO DE CINQUE QUINTILI, *Secrétaire Général de la Commission des Hôpitaux Romains.*
- Turin** PROFESSORE GIOVANNI FLECHIA, *Président de la Faculté de Philosophie et Professeur à l'Université de Turin.*
- Venice** SIGNOR FRANCESCO FERRARA, *Député au Parlement, Directeur de l'Ecole Supérieure de Commerce.*

Netherlands.

- La Haye** M. le DR. M. de BAUMHAUER, *Ancien Chef du Bureau de la Statistique au Ministère de l'Intérieur.*

Portugal.

- Lisbon** M. A. J. D'AVILA, *Ministre d'Etat honoraire, Conseiller d'Etat, et Député des Cortès.*

Russia.

- St. Petersburg** HIS EXCELLENCY M. SEMENOW, *Directeur du Comité Central de Statistique, Conseiller d'Etat actuel.*
- „ M. le DR. J. B. VERNADSKI, *Conseiller d'Etat actuel, Ex-professeur.*
- „ M. A. VESSELOVSKY, *Attaché au Ministère Impérial des Finances.*

Spain.

- Madrid** SEÑOR DON JOSÉ MAGAZ Y JAIME.

Sweden and Norway.

- Christiania**..... PROFESSOR T. H. ASCHEHOUG, *Membre de l'Assemblée Nationale de la Norvège.*
- „ M. A. N. KIAER, *Chef du Bureau de Statistique au Ministère de l'Intérieur, Membre de la Société Royale des Sciences.*
- Stockholm** M. le DR. FREDERIK THEODOR BERG, *Chef du Bureau Central de Statistique de la Suède.*
- „ M. EDWARD SCHEUTZ, *Ingénieur Civil.*

Switzerland.

- Geneva** M. MALLET.

Turkey.

- Constantinople.** HIS EXCELLENCY AHMED VEFYK PASHA, *Honorary Member of the Statistical Society of Paris.*
- Philippopolis** THOMAS MICHELL, Esq., C.B., F.R.G.S.

AMERICA.

Dominion of Canada.

- Ottawa** JOHN LANGTON, Esq., *Auditor-General.*
- „ EDWARD YOUNG, Esq., *formerly Chief of the Bureau of Statistics, United States of America, now, Secretary of the Board of Customs of Canada.*

United States.

- Albany, N.Y.** THE HON. WILLIAM BARNES, *Counsellor-at-Law (Ex-Superintendent of the Insurance Department).*
- Dorchester, Mass.** DR. EDWARD JARVIS, A.M., *President of the American Statistical Association, Boston.*
- New Haven, Conn.** FRANCIS A. WALKER, Esq., M.A., *Professor of Political Economy, Yale College.*
- Norwich, Conn.** The HON. DAVID A. WELLS, *President of the American Association for the Promotion of Social Science, Corresponding Member of the Institute of France.*
- Taunton, Mass.** JOHN E. SANDFORD, Esq., *Speaker of the House of Representatives. Insurance Commissioner.*

AUSTRALASIA.

New South Wales.

Sydney	EDWARD GRANT WARD, Esq., <i>Registrar-General.</i>
„	WILLIAM HENRY ARCHER, Esq., F.I.A.

New Zealand.

Wellington	JAMES HECTOR, Esq., M.D., F.R.S.
-------------------------	----------------------------------

Queensland.

Brisbane	HENRY JORDAN, Esq., <i>Registrar-General.</i>
-----------------------	---

South Australia.

Adelaide	JOSIAH BOOTHBY, Esq., C.M.G., <i>Under Secretary and Government Statist of South Australia.</i>
-----------------------	---

Tasmania.

Hobart Town	E. SWARBRECK HALL, Esq., M.R.C.S.
„	EDWIN CRADOCK NOWELL, Esq., <i>Government Statistician.</i>

Victoria.

Melbourne	HENRY HEYLYN HAYTER, Esq., <i>Government Statist.</i>
„ .....	... HIS HONOR SIR REDMOND BARRY, Kt., <i>Judge Supreme Court.</i>

NOTE.—The Executive Committee request that any inaccuracies in the foregoing List of HONORARY MEMBERS may be pointed out, and that all changes of address may be notified to the Secretary, so that delay in forwarding communications and the publications of the Society may be avoided.

INDEX TO RULES.

RULE

1. The Objects of the Society.
 2. Society to consist of Fellows and Honorary Members.
 3. No. of Fellows unlimited ; Hon. Members not to exceed 70.
 4. Fellows—Candidates to be proposed by two or more Fellows.
 5. Do. to be elected by Ballot.
 6. Do. on Admission may attach F.S.S. to their Names.
 7. Honorary Members, Proposed by Council ; Elected by Ballot.
 8. Fellows, to pay an Annual Subscription or a Composition.
 9. Do. how disqualified. Written notice of withdrawal required.
 10. Do. and Honorary Members, Expulsion of.
 11. Trustees. Property of Society, to be vested in Three.
 12. President, Council, and Officers, Number and Particulars of.
 13. } Do. do. do. Election and Qualifications of.
 14. }
 15. Do. do. do. Extraordinary Vacancies of.
 16. Committees, may be appointed by Council.
 17. Meetings, Ordinary and Anniversary, when to be held.
 18. Ordinary Meetings, Business of. Strangers may be introduced.
 19. Anniversary Meetings, Business of.
 20. Special General Meetings may be called.
 21. Auditors, Appointment and Duties of.
 22. President, Duties of. To have a Casting Vote.
 23. Treasurer, Duties of, subject to the Council.
 24. Secretaries, Duties of.
 25. Vice-Presidents, Powers of.
 26. Council, Duties of, in Publishing Papers and Expending Funds.
 27. } Do. Powers of, to frame Regulations not inconsistent
 28. } with these Rules.
 29. Do. to publish a Journal of the Transactions of the Society.
 30. Right of Property reserved in all Communications received.
-

RULES OF THE STATISTICAL SOCIETY.

Objects of the Society.

1. THE Statistical Society was established to collect, arrange, digest, and publish facts illustrating the condition and prospects of society, in its material, social and moral relations. These facts are for the most part arranged in tabular forms, and in accordance with the principles of the numerical method.

The Society not only collects new materials, but condenses, arranges, and publishes those already existing, whether unpublished or published in diffuse and expensive forms, in the English or in any foreign language.

The Society likewise promotes the discussion of legislative and other public measures from the statistical point of view. These discussions form portions of the Transactions of the Society.

Constitution of the Society.

2. The Society consists of Fellows and Honorary Members, elected in the manner laid down in the following rules.

Number of Fellows and Honorary Members.

3. The number of Fellows shall be unlimited. Foreigners or British subjects of distinction residing abroad may be admitted as Honorary Members: of whom the number shall not be more than seventy at any one time.

Proposal of Fellows.

4. Every Candidate for admission as a Fellow of the Society, shall be proposed by two or more Fellows, who, shall certify from their personal knowledge of him or of his works, that he is a fit person to be admitted a Fellow of the Statistical Society. Every such certificate having been read and approved at a Meeting of the Council, shall be suspended in the meeting-room of the Society until the following Ordinary Meeting, at which the vote shall be taken upon it.

Election of Fellows.

5. In the election of Fellows, the votes shall be taken by ballot. No person shall be admitted unless at least sixteen Fellows vote, and unless he have in his favour three-fourths of the Fellows voting.

Admission of Fellows.

6. Every Fellow elect shall appear for his admission on or before the third Ordinary Meeting of the Society after his election, or within such time as shall be granted by the Council.

The manner of admission shall be thus:—

Immediately after the reading of the minutes, the Fellow elect, having first paid his subscription for the current year or his composition, shall sign the obligation contained in the Fellowship-book, to the effect following:—

“We, who have underwritten our names, do hereby undertake, each for himself, that we will endeavour to further the good of the Statistical Society for improving Statistical Knowledge, and the ends for which the same has been founded; that we will be present at the Meetings of the Society as often as conveniently we can, and that we will keep and fulfil the Rules and Orders of this Society: provided that whensoever any one of us shall make known, by writing under his hand, to the President for the time being, that he desires to withdraw from the Society, he shall be free thenceforward from this obligation.”

Whereon the President, taking him by the hand, shall say,—“*By the authority and in the name of the Statistical Society I do admit you a Fellow thereof.*”

Upon their admission Fellows shall have the right of attaching to their names the letters F.S.S.

Admission of Honorary Members.

7. There shall be Two Meetings in the year, on such days as shall be hereafter fixed by the Council, at which *Honorary Members* may be elected.

No Honorary Member can be recommended for election but by the Council. Any Member of the Council may propose a Foreigner or British subject of distinction residing abroad at any Meeting of the Council, delivering at the same time a written statement of the qualifications, offices held by, and published works of the person proposed; and ten days' notice at least shall be given to every Member of the Council, of the day on which the Council will vote by ballot on the question whether they will recommend the person proposed. No such recommendation to the Society shall be adopted unless at least three-fourths of the votes are in favour thereof.

Notice of the recommendation shall be given from the chair at the Meeting of the Society next preceding that at which the vote shall be taken thereon. No person shall be elected an Honorary Member unless sixteen Fellows vote and three-fourths of the Fellows voting be in his favour.

The Council shall have power to elect as Honorary Members, the President for the time being of the Statistical Societies of Dublin, Manchester, and Paris, and the President of any other Statistical Society at home or abroad.

Payments by Fellows.

8. Every Fellow of the Society shall pay a yearly subscription of *Two Guineas*, or may at any time compound for his future yearly payments by paying at once the sum of *Twenty Guineas*.*

Defaulters.—Withdrawal of Fellows.

9. All yearly payments are due in advance on the 1st of January, and if any Fellow of the Society have not paid his subscription before the 1st of July, he shall be applied to in writing by the Secretaries, and if the same be not paid before the 1st of January of the second year, a written application shall again

be made by the Secretaries, and the Fellow in arrear shall cease to receive the Society's publications, and shall not be entitled to any of the privileges of the Society until such arrears are paid; and if the subscription be not discharged before the 1st of February of the second year, the name of the Fellow thus in arrear shall be exhibited as a defaulter on a card suspended in the meeting-rooms; and if, at the next Anniversary Meeting, the amount still remain unpaid, the defaulter shall be announced to be no longer a Fellow of the Society, the reason for the same being at the same time assigned. No Fellow of the Society can withdraw his name from the Society's books, unless all arrears be paid; and no resignation will be deemed valid unless a written notice thereof be communicated to the Secretaries. No Fellow shall be entitled to vote at any Meeting of the Society until he shall have paid his subscription for the current year.

Expulsion of Fellows.

10. If any Fellow of the Society, or any Honorary Member, shall so demean himself that it would be for the dishonour of the Society that he longer continue to be a Fellow or Member thereof, the Council shall take the matter into consideration; and if the majority of the Members of the Council present at some Meeting (of which and of the matter in hand such Fellow or Member, and every Member of the Council, shall have due notice) shall decide by ballot to recommend that such Fellow or Member be expelled from the Society, the President shall at the next Ordinary Meeting announce to the Society the recommendation of the Council, and at the following Meeting the question shall be decided by ballot, and if at least three-fourths of the number voting are in favour of the expulsion, the President shall forthwith cancel the name in the Fellowship-book, and shall say,—

“By the authority and in the name of the Statistical Society, I do declare that A. B. (naming him) is no longer a Fellow (or Honorary Member) thereof.”

* Cheques should be made payable to “The Statistical Society,” and crossed “Messrs. Drummond and Co.”

And such Fellow or Honorary Member, shall thereupon cease to be of the Society.

Trustees.

11. The property of the Society shall be vested in *three Trustees*, chosen by the Fellows. The Trustees are eligible to any other offices in the Society.

President, Council, and Officers.

12. The Council shall, independent of the Honorary Vice-Presidents, consist of thirty-one Members, of whom one shall be the President, and four be nominated Vice-Presidents. The Council shall be elected as hereafter provided. Any five of the Council shall be a quorum. From the Council shall be chosen a *Treasurer*, *three Secretaries*, and a *Foreign Secretary*, who may be one of the Secretaries. Six Fellows, at least, who were not of the Council of the previous year, shall be annually elected.

Election of President and Officers.

13. The President shall be chosen yearly by the Fellows. The same person shall not be eligible more than two years in succession.

The former Presidents who are continuing Fellows of the Society shall be Honorary Vice-Presidents; four Vice-Presidents shall be yearly chosen from the Council by the President.

Any Honorary Vice-President may take part in the deliberations of the Council on expressing a wish to that effect: and when attending the Meetings of the Council, shall exercise all the rights and powers of a Member of the Council.

The Treasurer and Secretaries shall be chosen yearly by the Fellows from the Council.

Election of Council.

14. The Council shall, previously to the Anniversary Meeting, nominate, by ballot, the *Fellows whom they recommend* to be the next President and Council of the Society. They shall also recommend for election a Treasurer and Secretaries (in accordance with Rule 12). Notice shall be sent to every Fellow whose residence is known to be within the limits of the metropolitan post, at least a fortnight before the

Anniversary Meeting, of the names of Fellows recommended by the Council.

Extraordinary Vacancies.

15. On any *extraordinary vacancy* of the Office of the President, or other Officer of the Society, or in the Council, the Secretaries shall summon the Council with as little delay as possible, and a majority of the Council, thereupon meeting in their usual place, shall, by ballot, and by a majority of those present, choose a new President, or other Officer of the Society, or Member of the Council, to be so until the next Anniversary Meeting.

Committees.

16. The Council shall have power to appoint *Committees of Fellows* and also an Executive Committee of their own body. The Committees shall report their proceedings to the Council. No report shall be communicated to the Society which is not approved by the Council.

Meetings Ordinary and Anniversary.

17. The *Ordinary Meetings* of the Society shall be monthly, or oftener, during the Session, which shall be from the 1st of November to the 1st of July, both inclusive, on such days and at such hours as the Council shall declare. The *Anniversary Meeting* shall be held on such day in June of each year as shall be appointed by the Council for the time being.

Business of Ordinary Meetings.

18. The business of the *Ordinary Meetings* shall be to admit Fellows, to read and hear reports, letters, and papers on subjects interesting to the Society. Nothing relating to the rules or management of the Society shall be discussed at the Ordinary Meetings, except that the *Auditors' Report* shall be received at the Ordinary Meeting in *February*, and that the Minutes of the Anniversary Meeting, and of every Special General Meeting, shall be confirmed at the next Ordinary Meeting after the day of such Anniversary or Special General Meeting. *Strangers* may be introduced to the Ordinary

Meetings, by any Fellow, with the leave of the President, Vice-President, or other Fellow presiding at the Meeting.

Business of Anniversary Meeting.

19. The business of the *Anniversary Meeting* shall be to elect the Officers of the Society, and to discuss questions on its rules and management. No Fellows or Honorary Members shall be proposed or admitted at the Anniversary Meeting. No Fellow shall moot any question on the rules or management of the Society at the Anniversary Meeting, unless after *three weeks' notice* thereof given to the Council, but amendments to any motion may be brought forward without notice, so that they relate to the same subject of motion. The Council shall give fourteen days' notice to every Fellow of all questions of which such notice shall have been given to them.

Special General Meetings.

20. The Council may, at any time, call a *Special General Meeting* of the Society when it appears to them necessary. Any ten Fellows may require a Special General Meeting to be called, by notice in writing signed by them, delivered to one of the Secretaries at an Ordinary Meeting, specifying the questions to be moved. The Council shall, within one week of such notice, appoint a day for such Special General Meeting, and shall give one week's notice of every Special General Meeting, and of the questions to be moved, to every Fellow within the limits of the metropolitan post, whose residence is known. No business shall be brought forward at any Special General Meeting other than that specified in the notice for the same.

Auditors.

21. At the *first Ordinary Meeting* of each year, the Fellows shall choose two *Auditors*, not of the Council, who, with one of the Council, chosen by the Council, shall audit the Treasurer's accounts, and report thereon to the Society, which report shall be presented at the Ordinary Meeting in February. The Auditors shall be empowered to examine into the particulars of all expenditure of the funds of the Society

where they shall see occasion, and may report their opinion upon any part of it.

Duties of the President.

22. The *President* shall preside at all Meetings of the Society, Council, and Committees, which he shall attend, and in case of an equality of votes, shall have a second or casting vote. He shall sign all diplomas of admission of Honorary Members. He shall admit and expel Fellows and Honorary Members, according to the rules of the Society.

Duties of the Treasurer.

23. The *Treasurer* shall receive all moneys due to, and pay all moneys due from, the Society, and shall keep an account of his receipts and payments. No sum exceeding Ten Pounds shall be paid but by order of the Council, excepting always any lawful demand for rates or taxes. He shall invest the moneys of the Society in such manner as the Council shall from time to time direct.

Duties of the Secretaries.

24. The *Secretaries* shall, under the control of the Council, conduct the correspondence of the Society; they or one of them shall attend all Meetings of the Society and Council, and shall have the care of duly recording the Minutes of the Proceedings. They shall issue the requisite notices, and read such papers to the Society as the Council may direct.

Powers of the Vice-Presidents.

25. A *Vice-President*, whether Honorary or nominated, in the chair, shall act with the power of the President, in presiding and voting at any Meeting of the Society or Council, and in admitting Fellows; but no Vice-President shall be empowered to sign diplomas of admission of Honorary Members, or to expel Fellows. In the absence of the President and Vice-Presidents, any Fellow of the Society may be called upon, by the Fellows then present, to preside at an Ordinary Meeting. The Fellow so presiding may admit Fellows, but shall not be empowered to act otherwise as resident, or Vice-President.

Powers of the Council.

26. The Council shall have control over the papers and funds of the Society, and may, as they shall see fit, direct the publication of papers and the expenditure of the funds, so, that they shall not at any time contract engagements on the part of the Society beyond the amount of the balance that would be at that time in the Treasurer's hands, if all pre-existing debts and liabilities had been satisfied.

27. The Council shall be empowered at any time to frame *Regulations* not inconsistent with these rules, which shall be, and remain in force until the next Anniversary Meeting at which they shall be either affirmed or annulled; but no Council shall have power to renew Regulations which have once

been disapproved at an Anniversary Meeting.

28. No Dividend, Gift, Division, or Bonus in money shall be made by the Society, unto or between any of the Fellows or Members, except as hereinafter provided.

29. The Council shall publish a Journal of the Transactions of the Society, and such other Statistical Publications, as they may determine upon, and may from time to time pay such sums to Editors and their assistants, whether Fellows of the Society or not, as may be deemed advisable.

30. All communications to the Society are the property of the Society, unless the Council allow the right of property to be specially reserved by the Contributors.

REGULATIONS OF THE LIBRARY.

1. The Library is open daily from 10 a.m. till 5 p.m., except on Saturdays, when it closes at 2 p.m.; and it is entirely closed during the month of September.

2. Members of the Society are permitted to take out Books on making personal application, or by letter addressed to the Librarian.

3. Members are not to have more than two works at a time, nor keep any books longer than a month.

4. Scientific Journals and Periodicals are not circulated until the volumes are completed and bound.

5. Cyclopædias and works of reference are not circulated.

6. Any Member damaging a book, either replaces the work, or pays a fine equivalent to its value.

7. Books taken from the shelves for reference, are *not* to be replaced, but must be laid on the Library table.

8. The Secretary shall report to the Council any infringement of these regulations.

DONORS TO THE LIBRARY.

DURING THE YEAR 1879.

Foreign Countries.

Austria and Hungary	Prussia.	The State of Massachusetts.
Bavaria.	Roumania.	
Belgium.	Russia.	The State of Michigan.
Denmark.	Saxony.	„ New York.
France.	Sweden and Norway.	„ Ohio.
Germany.	The United States of America.	„ Pennsylvania.
Greece.		„ Rhode Island.
Italy.	The State of Iowa.	„ Wisconsin.
Japan.	„ Kansas.	Uruguay.
Netherlands, The.		

Indian, Colonial, and other Possessions.

Bengal.	New South Wales.	South Australia.
Canada.	New Zealand.	Tasmania.
Mauritius.	Queensland.	Victoria.

Public Departments.

The Admiralty.	The Naval Medical Department.
„ Army Medical Department.	„ Museum of Practical Geology.
„ Board of Trade.	„ Police, Dublin Metropolitan.
„ Convict Prisons, Directors of.	„ Police, London Metropolitan.
„ Factories, Inspectors of.	„ Post Office.
„ Fire Brigade, Metropolitan.	„ Registrar-General of England.
„ Friendly Societies, Registrar of.	„ „ „ Ireland.
„ Home Office	„ „ „ Scotland.
„ India Office.	„ Tithe Commissioners.
„ Local Government Board.	„ Warden of Standards.

Academy of Natural Sciences, Philadelphia, U. S. A.	American Statistical Association, Boston, Mass.
Actuaries, The Institute of, London.	Amici, F. Bey, Egypt.
Agriculture, Central Chamber of.	Annand, W., Esq., London
Allen, Messrs. W. H. & Co., London.	Ansell, C., Esq., junr.
American Academy of Arts and Sciences, Boston.	Armstrong, Sir William, R.N., K.C.B., F.R.S., LL.D.
American Geographical Society of New York.	Ashworth, Henry, Esq., F.S.S.
American Philosophical Society of Philadelphia.	Asiatic Society of Bengal.
	„ „ Japan.
	Astor Library, New York, U. S. A.

During the Year 1879—Continued.

- Athenæum, The Editor of.
 Atkinson, E., Esq., Boston, U.S.A.
 Austrian Central Statistical Commission.
 Austrian Consul-General, London.
 Baker, Dr. H. B., Lansing, U. S. A.
 Bankers' Institute, London.
 „ Magazine, London.
 „ „ New York.
 Bavaria, Royal Bureau of Statistics.
 Behm, Herr G., Berlin.
 Belgium, Academy, Royal.
 „ Minister of Interior.
 Berg, Dr. F. T., Stockholm.
 Berlin, Statistical Bureau of.
 „ Imperial Statistical Office at.
 Bikélas, D., Esq., Athens.
 Boccardo, Professor G., Italy.
 Boddy, E. M., Esq., F.R.C.S., F.S.S.
 Böckh, Herr, Berlin.
 Bodio, Professor Luigi, Rome.
 Boothby, J., Esq., C.M.G., South Australia.
 Boschkemper, G., Esq., Holland.
 Bourne, Stephen, Esq., F.S.S.
 Bowditch, H. J., Esq., Boston.
 Brachelli, Dr. H. F., Vienna.
 British Association, The.
 Bruton, Leonard, Esq., Bristol.
 Budapest, Chamber of Commerce.
 „ Statistical Bureau.
 Buenos Ayres, Statistical Bureau of.
 Bunso Kurê, Mr., Japan.
 Bureau des Longitudes, Paris.
 Carr, Henry, Esq., London.
 Centennial Commission, 1876, U.S.A.
 Cernuschi, H., Esq.
 Chambers of Commerce, The Associated.
 China, The Inspector-General of Chinese Maritime Customs.
 Civil Engineers, Institution of.
 Cobden Club, the Committee of.
 Commercial World, The Editor of.
 Coni, Dr. E. R., Buenos Ayres.
 Cornish, Surgeon-Major W. R., F.R.C.S., &c.
 Courtney, J. M., Esq., Canada.
 Coxworthy, F., Esq., Chertsey.
 Craigie, Captain P. G., London.
 Daniels, W. H., Esq., London.
 Danvers, Juland, Esq., London.
 Deloche, M., Paris.
 Denmark, Statistical Bureau of.
 „ Political Economy Soc.
 Dent, W. T., Esq., York.
 Dodge, J. R. Esq., Washington.
 Doyle, Patrick, Esq., C.E.
 Dublin, Chief Com. of Police.
 Du Cane, Colonel E. F., C.B.
 Dun, John, Esq., F.S.S.
 Durham University College of Medicine.
 East India Association, London.
 Economist, The Editor of.
 Economiste Français, The Editor of.
 Edinburgh, The City Chamberlain.
 Egypt, Ministry of the Interior.
 Ellison & Co., Messrs., Liverpool.
 Engel, Dr. Ernest, Berlin.
 Everett, H. Sidney, Esq., Berlin.
 Fairman, E. St. J., Esq.
 Farr, Dr. W., F.R.S., London.
 Ficker, Dr. Adolf, Vienna.
 Finance Chronicle, The Editor of.
 Fleming, William, Esq.
 Forrest, E. L. de, Esq., Watertown Conn.
 Foville, M. A. de, Paris.
 France, H. E. Minister of Agriculture and Commerce.
 France, H. E. Minister of Finance.
 „ „ Justice.
 „ „ Public Instruction.

During the Year 1879—Continued.

Frankfort-on-M., Statistical Society.
 „ Medical Society.
 Frankland, F. W., Esq., N. Zealand.
 Franklin Institute, Philadelphia.

German Consul-General, London.
 Giffen, Robert, Esq., F.S.S.
 Glasgow, Philosophical Society of.
 „ Sanitary Department.
 „ Unemployed Relief Fund
 Committee.
 Goehlert, Dr. V., Germany.
 Guillaumin, Messrs., Paris.
 Guy, Dr. W. A., F.R.S., &c.

Hall, E. Swarbreck, Tasmania.
 Hamburg, Chamber of Commerce.
 „ Statistical Bureau of.
 Hancock, Dr. W. N., Dublin.
 Harrison & Sons, Messrs., London.
 Hart, R., Esq., Shanghai.
 Hayter, H. H., Esq., Melbourne.
 Hedley, F. T., Esq., F.S.S.
 Henry, James, The Trustees of.
 Hewson, Gen. M. B., Canada.
 Hill, Chas. S., Esq., Washington.
 Historic Society of Lancashire and
 Cheshire.
 Hole, James, Esq., London.
 Hood, Charles, Esq., F.R.S., F.S.S.
 Howard Association, London.
 Hungary, Ministry for Religion and
 Education.
 Hungary, Statistical Bureau of.

Ingall, W. T. F. M., Esq., F.S.S.
 Insurance Gazette, The Editor of.
 „ Record, The Editor of.
 Investors' Monthly Manual, The
 Editor of.
 Ireland, Statistical Society of.
 Italian Legation, London, The.
 Italy, Director General of Statistics.
 „ Hygienic Society, Milan.

Janssens, Dr. Brussels.
 Japan, Statistical Office, Tokio.
 Jarvis, Dr. E., Dorchester, Mass.
 Jevons, Prof. W. Stanley, F.R.S.
 Jordan, Henry, Esq., Brisbane.
 Kay, Robert, Esq., Adelaide, S.A.
 Keaughran, T. J., Esq., Singapore.
 Keleti, Chas., Esq., Budapest.
 Kelly, Dr., Worthing.
 King's College, London.
 Knox, John Jay, Esq., Washington.
 Korosi, Joseph, Budapest.
 Kyshe, J. B., Esq., Mauritius.

Labourers' Friend, The Editor of.
 Layton, Messrs. C. and E., London.
 Le Duc, Hon. W. G., Washington.
 Lefevre, G. J. Shaw, Esq., M.P.
 Levasseur, M. E., Paris.
 Lisboa, Geographical Society of.
 Liverpool, Lit. and Phil. Society.
 Liversidge, A., Esq., Sydney.
 Lloyds, The Committee of.
 Local Taxation Committee.
 London Hospital House Committee.
 Longman and Co., Messrs., London.
 Luttmann, J., Esq., London.
 Lyons, Société des Sciences Medi-
 cales de.

MacCarthy, Rev. E. F. M., Birming-
 ham.
 Machinery Market, Editor of.
 Macmillan and Co., Messrs., London.
 Madrid, Geographical Society of.
 Mallet, Sir Louis.
 Manchester Literary and Philo-
 sophical Society.
 Manchester Public Free Libraries.
 „ Statistical Society.
 Mauritius, Governor-General of.
 Mayr, Dr. George, Munich.
 Mechanical Engineers, Institu-
 tion of.

During the Year 1879—Continued.

- Mercator, Ernst, Esq., Frankfort.
 Morselli, Prof. E., Italy.
 Mosser, François, Esq.
 Mouat, Dr., F.R.C.S.

 National Union of Elementary Teachers.
 Nature, The Editor of, London.
 New York, Trustees of the Cooper Union.
 Netherlands Consul at Liverpool.
 " Legation, London.
 " Minister of the Interior.
 " Statistical Society of.
 Neumann-Spallart, Dr. Fr. Xav., Vienna.
 New South Wales, Agent-General for Registrar-General.
 " Registrar-General.
 New Zealand, Registrar-General.
 Nimmo, Joseph, Esq., junr., Washington.
 Norway, Central Statistical Bureau.
 Nowell, E. C., Esq., Tasmania.

 Paris, Statistical Society of.
 Plon, Messrs., Paris.
 Portugal, Consul - General for, London.
 Prague, Statistical Commission of.
 Prinsep, C. C., Esq., London.
 Prussia, Royal Statistical Bureau of.
 Purdy, F., Esq., F.S.S., London.

 Quekett Microscopical Club.
 Queensland, Registrar-General of.

 Ramsay, Alexander, Esq., Banff.
 Ravenstein, E. G., Esq., London.
 Redgrave, A. Esq., C. B., F.S.S.
 Review, The Editor of.
 Révue Bibliographique Universelle, The Editor of, Paris.
 Révue Géographique Internationale, The Editor of, Paris.
 Riddle, T. C., Esq., Victoria.

 Rivista Europea, The Editor of.
 Rome, Giunta Centrale de Statistica.
 Roumania, Central Statistical Office.
 Royal Agricultural Society.
 " Asiatic Society.
 " " " Bombay Branch.
 " Colonial Institute.
 " Geographical Society.
 " Institution.
 " Irish Academy.
 " Med. and Chirurgical Society.
 " United Service Institution.
 Russell, Dr. J. B., Glasgow.
 Russia, Imp. Geographical Society.

 St. Bartholomew's Hospital, London.
 San Francisco, Mercantile Library Association.
 Saunders, William, Esq., F.S.S.
 Saxony, Royal Statistical Bureau of.
 School Board for London.
 Semenow, H. E., Mons. P. de.
 Shaw, Capt. E. M., London.
 Simmonds, P. L., Esq., London.
 Slaughter, Mihill, Esq., F.S.S.
 Smith, Dr. George, Edinburgh.
 Smithsonian Institution, U. S. A.
 Snow, Dr. E. M., U.S.A.
 Social Science Association.
 Society of Arts, London.
 South Australia, Agent General for.
 " " Chief Secretary of.
 " " Philosophical Soc.
 Stark, W. E., Esq., London.
 Statist, The Editor of.
 Steel, E. T., Esq., Centennial Commission, U. S. A.
 Street Bros., Messrs., London.
 Surveyors, The Institution of.
 Sutton, E., Esq., London.
 Sweden, Central Statistical Bureau.

 Tasmania, The Government Statist.
 " The Registrar-General of.
 " Royal Society of.

During the Year 1879—Continued.

Tayler, Mrs. N., F.S.S.	Victoria, Registrar-General of.
Thubron, Robert, Esq.	„ Royal Society of.
Torenos, The Count of, Spain.	Vine, J. R. Somers, Esq., F.S.S.
United States, Agric. Department.	Wandsworth District Board of
„ „ Bureau of Statistics.	Works.
„ „ Commr. of Education.	Watherston, E. J., Esq., F.S.S.
„ „ Comptr. of Currency.	Watson, W. W., Esq., Glasgow.
„ „ Naval Observatory.	Weeks, J. D., Esq., U. S. A.
University College, London.	Weisz, Dr. B., Austria.
Uruguay, The Directorate-General	Wells, The Hon. David A., U. S. A.
of Statistics.	Western, The Editor of, St. Louis,
	U. S. A.
Vaillant, M., Montevideo.	Williams, R. Price, Esq., London.
Van Senten, H. S., Esq., Liverpool.	Williamson, S., Esq., Liverpool.
Vessélovsky, A., Esq., St. Petersburg.	Wolverhampton Chamber of Commerce.
Victoria, Agent-General for, London.	Wright, C. D., Esq., Boston, Mass.
„ Government Statist.	Wright, George, Esq., F.S.S.
„ Minister of Mines.	

JOURNAL OF THE STATISTICAL SOCIETY.

COST OF A COMPLETE SET (IF NOT OUT OF PRINT).

1838-79. (42 Vols., unbound.)

	£	s.	d.
Vol. I. (1838.) 9 Numbers at 1s. 6d.	-	13	6
Vol. II. (1839.) 3 Numbers at 1s. 6d. and 3 Parts at 2s. 6d.	-	12	-
Vols. III—XI. (1840-48.) 9 vols. 10s.	4	10	-
Vol. XII. (1849.) Including a double number.....	-	12	6
Vols. XIII—XIX. (1850-56.) 7 vols. at 10s.	3	10	-
Vol. XX. (1857.)	-	11	-
Vol. XXI. (1858.)	-	12	-
Vol. XXII. (1859.)	-	11	6
Vol. XXIII. (1860.)	-	13	-
Vols. XXIV—XXV. (1861-62.) 2 vols. at 15s.	1	10	-
Vols. XXVI—XXVII. (1863-64.) 2 vols. at 14s.	1	8	-
Vol. XXVIII. (1865.)	-	17	6
Vol. XXIX. (1866.)	-	15	6
Vol. XXX. (1867.).....	-	19	-
Vol. XXXI. (1868.)	-	15	6
Vol. XXXII. (1869.)	-	14	-
Vol. XXXIII. (1870.)	1	-	-
Vol. XXXIV. (1871.)	1	-	-
Vol. XXXV. (1872.)	1	-	-
Vol. XXXVI. (1873.).....	1	-	-
Vol. XXXVII. (1874.)	1	-	-
Vol. XXXVIII. (1875.).....	1	-	-
Vol. XXXIX. (1876.)	1	-	-
Vol. XL. (1877.)	1	-	-
Vol. XLI. (1878.)	1	-	-
Vol. XLII. (1879)	1	-	-

General Analytical Indexes:—

To the First Fifteen Volumes (1838-52)	-	3	6
" Ten Volumes (1853-62)	-	3	6
" " (1863-72)	-	3	6
	£29	15	6
Discount 40 per cent. (<i>allowed to Members only</i>)	11	18	2
	£17	17	4

Sets, or single copies of any number, of the *Journal* (if not out of print), can be obtained of the publisher, E. Stanford, 55, Charing Cross, London, S.W.

Members only, can obtain sets or single copies of any number of the *Journal*, at the Society's Rooms, King's College Entrance, Strand, W.C., London.

By a resolution of the Council, dated 12th May, 1854, the price of back numbers of the *Journal* of the Society, charged to Members, was raised from one-half to three-fifths of the publishing price.



